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PREPARING A GUARD TRAINING PROGRAM

By V. P. VETTER

Fire Dispatcher

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In the preparation of this article, it is assumed that the value of training is fully appreciated also that it is desirable to afford the Guard or Protective man a training that will enable him to efficiently accomplish the duties of his position.

With that assumption in view, the matter of affording a program for effective Guard Training involves many factors which will have a direct influence on the benefits to be derived by the Trainee. For example, Guard Training to be successful, must be properly planned and organized. To do that, one must consider the various factors that affect the Training program. Listed in the sequence of their relationship to the subject they are:

Selection of a Director of Training.

Job and Training Needs Analyses.

Development of the Training Program

A. The Guard School Program.

B. "Individual" Training Program

A. The Guard School Program

When and Where to have the Guard School

Selection and Training of Trainers.

Assignment of Training Activities to Trainers.

Selection of Sites for Training Activities

Preparation of Training Methods.

Arrangements for the Guard School

(Subsistence, Lodging, Transportation, etc.)

Arrangement of Training Activities on Guard School Program

Assignment of Trainees to Classes

Supervision of Guard School Training Activities

B. "Individual" Training Program

Preparation of list of Training Needs for each Trainee.

Assignment of Training Needs to Trainers.

Supervision of Training Activities.

Evaluation of Guard Training.

Selection of a Director of Training

The success or failure of Guard Training is definitely related to the ability of the Training Director. He is responsible for the development of the Training Program and the organization work necessary to attain the objectives.

The magnitude of the position requires that careful consideration be given to an applicants' ability, in relation to the qualifications of the job, before giving him an appointment as Training Director.

Qualifications that should be considered are:

- The Director must be able to Plan.
- He should be an Organizer.
- He should be familiar with the job that is to be taught.
- He should understand Principals of Training.
- He should be a Conference Leader.
- He should be able to supervise.
- He should have a friendly personality.
- He should have a desire to help others through training.
- He should have patience.
- He should be open-minded.

Job and Training Needs Analyses.

Upon appointment, the Director should commence the development of a Training Program. In order to determine what the Guards should receive training in, the Director, in conference with the District Rangers, prepares a "Job and Training Needs" analysis chart for each protective position. Such an analysis should be based on the duties necessary to satisfactory performance rather than those that had been done in the past. A sample form for a "Job and Training Needs" chart follows:

"JOB AND TRAINING NEEDS" ANALYSIS CHART

..... Name of Patrol District	 Name of Ranger District		
..... Name of Guard	 Name of Forest		
..... Date				
Duty to be Performed	Dist. Ranger's Report			Supervisor's recommendation for Training
	Good	Fair	Poor	
Fire Prevention				
Hazard Abatement Work				
Recognizes fire hazards	†			
Takes action to get them abated			†	†
Obtains cooperation from individuals			†	†
Law Enforcement				
Understands Fire Laws	†			
Public contact on arrests			†	†
Presuppression				
Care of Fire Tools & Equipment			†	†

Under duty to be performed, the Guard's job is divided into Fire Prevention, Presuppression and other classifications so that a systematic analysis can be made. A job is given a set-up heading then later subdivided into the various details that lead to the accomplishment of it. An illustration of the procedure is shown on the preceeding chart. In columns under District Ranger's report, the Ranger checks the Guard's accomplishment as to

Determination of Training Needs

After the Director has obtained the Supervisor's recommendation for the Training Needs of each man, he then prepares a chart to indicate the Training Needs of all the men. See Chart No. 2.

[illegible]

The Training Program

A. The Guard School program
B. "Individual" Training program

In order to determine the activities which should be included in the Guard School and Individual training programs, the Director, in conference with the Supervisor, prepares a chart on which each Training activity is listed in relation to "Major Importance" or "Minor Importance" in training priority. See Chart No. 3.

TRAINING PRIORITY CHART

Major Importance	Minor Importance
List name of Training Activity	List name of Training Activity

Classification of each activity should be decided by its importance to the job requirements for satisfactory performance.

Upon completion of the "Training Priority" chart, they then assign the various activities to the Guard School or "Individual" training programs. See Chart No. 4.

TRAINING PROGRAM "CLASSIFICATION CHART"

Guard School Program	"Individual" Training Program
List name of Training Activity	List name of Training Activity

The assignment of the activities to each program should be decided by the value that "Group Training" will afford and by their classification as to importance.

Having completed the assignment of activities to the programs, the director now segregates the "Training Needs" list (Chart No. 2) into the Guard School and "Individual" training programs. Such a segregation should afford the Director with a list of the activities to be covered on each program and the names of the men that are to receive training in each activity. See Charts No. 5 and No. 6.

Chart No. 5 TRAINING NEEDS LIST—GUARD SCHOOL PROGRAM

Name of Trainee	Name of Training Activity								
	Fire Prevention	Hazard Reduction	Recognize fire hazards	Abatement of fire hazards	Presuppression	Care of fire tools & equipment	Suppression of fires	Building fire line	etc.
John Smith								†	
Bill Jones			†	†		†			†
Frank Lee			†						
Total No. of Trainees		2	1			1		1	1

Chart No. 6 is similar to No. 5 except that the names of the training activities and trainees should correspond with the Training Needs for the “Individual” training program.

Having completed the segregation of the Training Needs list into the proper program for training, the Director is now in position to Plan and Organize the Guard School program.

A. The Guard School Program

When and Where to have the Guard School

The selection of a location for the school also the dates on which it will be held are of primary importance and should be given priority in planning the Guard School program. The reason becomes apparent when one considers that Training Methods in order to be practical, should be devised to suit the locality in which the school is held. The dates for having the school should be set far enough in advance so that ample time is allowed for the Selection and Training of Trainers, Preparation of Training Methods and other factors necessary to planning and organizing for the school.

Selection and Training of Trainers

The selection of trainers can be accomplished through a conference between the Director and the Forest Supervisor. Members of the Supervisor’s staff, District Rangers and Assistant Rangers should be listed for

Trainer positions. Consideration should also be given to Guards who are qualified through satisfactory performance of their work.

Having obtained the names of the men who will be available for Trainer positions, the Director should proceed to discuss the training job with them. He should arrange for a meeting of all Trainers at which time they should discuss, through conference, the various Modes of Training. The Director assumes the roll of Conference Leader and directs discussion towards affording the Trainer with a knowledge of the different Training Modes and their application to the job. The following Modes are listed in priority as to their value in training.

- 1. Doing the Job.
- 2. Demonstration.
- 3. Conference or Discussion.
- 4. Lecture.

Upon deciding that all Trainers understand the Modes of Training, the Director proceeds a step further in training the Trainers. Through conference, he allows them to decide the Modes of Training that are to be used in accomplishing each training activity on the Guard School program. The Director commences the discussion as Conference Leader, later relinquishing the role to the various Trainers in order to give them training as a Conference Leader.

Assignment of Training Modes to each training activity should be recorded. Such a record can be used to good advantage when assigning the training activities to the Trainers and to afford them with the Modes that they should employ when giving the training. The following chart has been devised for that purpose.

Chart No. 7 TRAINING MODES CHART

Name of Training Activity	Check Modes to be Used				Name of Trainer
	Doing the Job	Demonstration	Conference	Lecture	
Const. fire line	†	†	†	†	Smith
Care of fire tools		†	†	†	Jones
Morale building				†	Ellis

Assignment of Training Activities to Trainers

In addition to training the Trainers, the Director should endeavor to select the proper Trainer for each training activity, that is, he should select one who is qualified as a Conference Leader when that Mode of Training is to be employed, etc. By referring to Chart No. 7, the Director can readily ascertain the Mode of Training to be used and then select a Trainer who is capable to give that type of training.

Selection of Sites for Training Activities

Where the training activity will require an outdoor demonstration or field work, the Trainer should visit the location of the school and select a site for giving the training. In making that selection, the Trainer should consider the site's adaptability to the Training Mode that is to be used. It

is advisable that the Director accompany the Trainer as it will allow supervision of the selection of the site and afford an opportunity for giving him training.

Preparation of Training Methods

Another important factor relating to successful Guard Training is the preparation of a Method for giving the training. Each Trainer should work up a complete outline for giving the training of the activity assigned to him. Such an outline can be termed a Training Method.

Supervising the preparation of the Training Methods will afford the Director an opportunity for additional training of the Trainer. That supervision can be accomplished in conference with the Trainer when he is preparing his Training Method.

It is essential that a record be made of the details of each Method to be used. Such a record will prove valuable to the Trainer for reference use. It will also afford the Director with a complete picture of the training that is to be given and can be useful to check the Trainers adherence to the program, once it has been adopted. A sample Training Method is as follows:

Method for training "Construction of a fire line".

- A. Take trainees to training site.
- B. Trainer explains the Construction of a fire line.
- C. Construction of a fire line by an experienced man. (Note—Trainees should be placed at a point where they can witness the demonstration.)
- D. After demonstration, Trainer in conference with the trainees, discuss the construction of the fire line by the experienced man.
- E. Each trainee should now construct a fire line.
- F. The Trainer and trainees now inspect the individual fire lines that have been constructed, discussing the weak points in each.
- G. The Trainer now requires each trainee to construct fire line until his work is satisfactory.

A study of the above Method will reveal that "Doing the Job" was the principal Mode of training, with Lecture, Demonstration and Conference Modes being employed to attain the objective.

Upon having obtained the Training Methods for all the activities, the Director arranges for the Forest Supervisor to review them. Such a procedure will afford the Supervisor a knowledge of the type of training that is to be given and allow an opportunity for supervision of the Training Program.

Arrangements for Having Guard School

Arrangements for having Guard School involve many details. The matter of lodging and subsistence, transportation, supplies and equipment must be attended to. Here again we have several factors that affect the value of training. Briefly, they can be summarized into two classes. They are:

- A. Those which influence the morale of Trainers and Trainees.
Food, lodging and Conference room.

Sanitation facilities.

Recreation and entertainment.

B. Those necessary to accomplish the training.

Transportation.

Supplies and equipment.

A morale favorable to training is essential. By providing good food, comfortable lodging, proper sanitation facilities, recreation and entertainment also suitable Conference room (where one is used) the Director can do much towards securing the correct attitude. He should also provide suitable and sufficient equipment for use in giving the training. Lack of equipment will result in delays that are apt to cause inefficiency in training.

Arrangement of Training Activities on the School Program

The place of each training activity on the program should be decided by its effect on training. For example, an activity that is effective in breaking down the tension that usually prevails at a meeting should be placed at the head of the program. Experience with several Guard Schools has indicated that an activity based on the Conference Mode of training and not too complicated in nature is suitable for the purpose.

The Director should study each activity with a view of placing it on the program in the sequence that will insure a good psychological effect as well as its relation to the balance of the activities in training sequence.

The amount of time allotted to each training activity should be decided by considering the Trainers estimate of amount needed and by its relation in training value to the others. If possible, the Trainer should complete his training within the period allotted to him. However, it cannot be considered out of line for the Trainer to extend his training period when necessary to complete the training of an important activity. Through close supervision and flexibility of the program, the Director should be able to adjust the training period to take care of emergency conditions.

Assignment of Trainees to Classes

By consulting the Training Needs list, Guard School program, (Chart No. 5) the Director can readily determine the assignment of trainees to the training activities. In some instances there may be cases where the trainee is listed to attend two classes simultaneously. When that occurs, the Director can decide which class the trainee should attend by comparing their values in training importance, giving priority to the one greatest in value. When a training cannot be given at the Guard School due to interference of classes, it should be so noted, then later given on the "Individual" training program.

Preparation of a list of the trainees that are to attend each class is essential and will be useful in organizing the classes at the school

Supervision of Guard School Training Activities

Having systematically prepared for the Guard School, the Director should now see that the training is given. It is essential that he give keen supervision to the training activities in order to correlate them into a smoothly operated program. He should keep an alert watch for signs of mental

fatigue or lack of interest. Dragging out a training activity is not conducive to effective results. Intense interest and pep are necessary and the Director should endeavor to see that they are maintained. Occasionally, he can discover some factor in the training that the Trainer has overlooked, bring-in it to attention when a suitable opportunity becomes available.

Success of the Guard School is dependent upon these general factors.

1. Planning the Training Program.
2. Development and Preparation of the Organization necessary to give the training.
3. Giving the Training.

Failure to recognize the importance of either of them when preparing a Guard Training program is likely to be reflected in poor training being given to the Guard.

B. The "Individual" Training Program

Previously in this article it was stated that because of fundamental factors, the Guard Training program must necessarily evolve into two training programs.

Having covered the first part of the training with the Guard School program, the Director should now commence preparing a program to cover the second part or "Individual" training.

Teaching the Guard while he is working on the job is a very effective way to give training and should be adapted to this stage of the Training Program.

Preparation of a list of Training Needs for each Guard

In preparing a program for "Individual" training, the primary requisite is to determine the Training Needs of each trainee. Earlier in the preparation of the Training Program it was necessary to determine the activities that were to be included on the Guard School and "Individual" training programs. At that time charts were prepared showing the composite Training Needs. By reference to the Training Needs list, "Individual" training program, chart No. 6, the Director can conveniently prepare a list of the Training Needs of each trainee for use in "Individual" training. Such a list can be recorded on a chart for use by the Trainer. See Chart No. 8

In addition to the listing of the Training Needs, space is provided on the chart for recording the name of the Trainer and the date or dates on which the training is given. A record of that nature will be found valuable in supervision of the "Individual" training.

Chart No. 8 INDIVIDUAL TRAINING NEEDS

John Jones		Arroyo Seco	
Guards Name		Name of Ranger District	
List of Training Needs	Name of Trainer	Date of Training	
Personal appearance	Coulter	5/10/31	
Public contact	Coulter	5/10/31	

Assignment of Training Needs to Trainers

Upon compiling a Training Needs list for each trainee, the Director now segregates the charts by Ranger Districts for assignment to the District Rangers for training.

Responsibility for giving the training as listed on the "Individual" Training Needs charts necessarily belongs to the District Ranger. In some cases he can assign certain training activities to his Assistant or to a protective man qualified to do the job.

The benefits derived from "Individual" training are determined by these factors:

- A. The District Rangers desire to give Training.
- B. The District Rangers knowledge of standards for doing each job.
- C. The District Rangers ability to give "Individual" Training.
- D. The trainees desire to receive Training.

Factor B. "District Rangers knowledge of standards for doing each job" is of primary importance. Training cannot be successful unless the Trainer is capable of training "Individuals" to do the job according to the desired standards. That factor reveals the need for well trained District Rangers.

Supervision of "Individual Training"

Supervision of "Individual" training is necessary in order to determine the manner in which the District Ranger accomplishes his assignment, also the effectiveness of such an endeavor. Field inspections should be made by the Training Director and members of the Supervisor's staff. Such inspections should reveal the type of training being given and the value received. In addition, the District Rangers should be required to submit a written report on the training activities covered the previous month.

Evaluation of Guard Training

Correct evaluation of a Training Program is usually difficult to accomplish. To determine the value of training, one must have some measure to use for that purpose. By reviewing the Guard's performance of work during the year, one can generally determine the success of the training that has been given to him. However, a more definite method for accomplishing an evaluation can be had by preparing a second "Job and Training Needs" analysis chart (see chart No. 1) and checking the Training Needs with the first chart. By doing that, a picture of the results of training is afforded and the Forest Supervisor can conveniently and efficiently determine the effect that training had upon the trainee's accomplishments.

Failure of a trainee to respond to training will indicate either a weakness in the type of training that was given to him or that he is unsuited for the position

REVIEWS

Fire Fighting: An analysis of the Fireman's Job with Suggestions as to the Organization and Operation of Training—Issued by the Federal Board for Vocational Education—Bulletin 155.

This bulletin will interest you because of its name; it will interest you also to see how closely the problems of the city fire fighters parallel your own. It is of interest also to see how closely the woods development is paralleling that of the city—the development from unorganized rough-and-ready methods to an orderly, highly specialized technique.

In the city the development has been an attempt to keep pace with the ever increasing protection need. Cities are larger, buildings larger, concentration of people greater, concentration of materials greater, with hundreds of new products with many degrees of inflammability. The fireman today has hundreds of things to learn that the pioneers in his profession never dreamed of.

In the early days fire-fighting was rough, destructive, highly spectacular, dangerous and to some extent skilled. The common method depended not on skill but volume. The objective seems to have been not so much protection of property as putting out the fire. Windows and doors were smashed open and buildings were flooded with water, the water damage often exceeding the fire damage.

Now the job is highly systematized and specialized. Each crew or sub-crew knows just what to do and when to do it to coordinate with the action of other crews. Instead of throwing great quantities of water through windows in the hope that some of it will reach the fire, now the hose is taken into the building and the right amount of water is applied at the right place. Surplus water is systematically removed. Meantime another crew has been systematically protecting the contents of the building and yet another looking after ventilation, first aid, etc. But possibly it is not a fire on which water can be used; some fires are smothered with foam and others with chemicals or gas. The fireman is expected to know what to use and how to use it without experimenting on the job. Not to know is incompetence. To make sure that all do know requires training.

But before discussing training compare our fire history with the rough sketch given above. Did we have the same or similar crude, rough beginning? Do we now have a recognized systematic learnable technique?

We are at least rapidly acquiring one. The successful fireman today does not just "hit'em quick and hard". He is quick enough to be sure. He sizes up the situation, estimates the number of chains of line to be constructed, the probable time he will have to construct it and then computes the number of men, the number of pumps, plow units, etc. needed and sends in his order. Then while men and equipment are on their way he plans his organization and method of attack. As men arrive they are assigned to sectors, the axe men clear the way, the plow follows, the line is burned out, the pumps are in place and before the danger period arrives next day the line is completed and mop-up begun. The technique, precision and assurance is approaching that of the city fire service.

As yet we do not have the variety or the same standardization of equipment that is found in the city. Perhaps that is only apparent. Some of our equipment is new and we are finding new uses for old. Just what is the best way of using the "back-filler" or a tank truck on a fire? What I mean is that as yet we can scarcely say of all things that not to use in a certain way shows incompetence, of some we can. New uses are developing too rapidly for that. Likewise the city man has his new methods and new equipment to learn. Some things develop by accident and some as a result of definite studies. Cities were slow in developing research; so are we but probably not so much so when you consider the time.

In training it seems to me that we have decidedly the best of it. To be sure some cities have better training programs than we have, but then they have been at it longer. On the other hand some cities have practically no program at all. Many of them have little that is systematic and planned. They still follow the old method of assigning a new man to odd jobs wherever he can be useful and letting him gradually pick up knowledge by absorption. This method worked well in the old days but is inadequate now. There are too many things to learn. There is too much danger of the man learning wrong or obsolete methods or outgrown traditions. A highly technical job demands systematic training.

The training method advocated by the bulletin is essentially that which we are trying to follow in the Service. As all good training methods should, it starts with the job, the things the man actually does or should do. Getting at this requires a detailed analysis of the job—and detailed means just that, getting right down to the smallest possible detail that affects results.

Training in general is best done on the job. But on a fire is a poor time and place, particularly for some kinds of training. How and where to use chemicals for example, or the damage and dangers of the same chemicals under other conditions. So there are a lot of training jobs that can be done before the fire starts. Some in a class room, some on the equipment and some on specially prepared equipment such as training towers—buildings erected for drill in climbing, taking up hose, putting ladders in place, rescue work, etc.

The analysis of the fire job given in the bulletin divides the activities of firemen into twenty-four classes: five in prevention and nineteen in fire fighting. They do not use the term "suppression" or make a separate class of "pre-suppression". Care of equipment, quarters and grounds is classed as fire fighting. Ten of their nineteen activities we have although of course, our jobs under these classes are different from theirs. We "care for equipment", we "receive and transmit alarms", we "lay hose lines", we "administer first aid on the job", but we do not "care for hydrants" or "use ladders", at least not in my experience.

Under public relations, one of the five prevention classes, they list sixteen jobs. While they operate in the city and we in the country yet we have just about all of these sixteen jobs, at least in some places. Perhaps we would place the emphasis different. For example, the first PR job listed under "What he Does" is "Keeps up personal appearance and dress".

On some ranger districts that is as yet not so important, yet at some guard training camps I have seen it given considerable emphasis. It seems to be coming. And aside from PR, psychologists tell us that it has an important bearing on our efficiency. But I'm not arguing for it, just telling you what I find.

The second job under prevention will also interest you. I think we all go with them a hundred per cent in it: "Sets example for observance of fire laws in his neighborhood". Number six some of us do not like so well but we cannot get away from it either: "Makes addresses * * * *"

One place where the older activity has the best of us, or at least differs, is shown by the bibliography in the back of the bulletin—four and a half pages. How long will it be before one could list four and a half pages of books and magazines dealing with fire control in the forest? Possibly not so long. The more the technique of fire control develops the more there will be written about it

The study on which this bulletin is primarily based was made in cooperation with the Los Angeles Fire Department and at their request. It includes the cooperation of many others.

SUGGESTIONS FOR DISCUSSION

The subject for discussion is the best method, or possibly whether or not method is necessary, in preparing a program for training guards. In Regions where there are no guards the same principles would, no doubt, govern the training of cooperators.

We all agree that guards need training—training until they know just what is expected of them and the accepted standard for doing it. No man can be expected to do a good job until he learns how, and no man should be trusted to do a thing until he has been tested and you know that he knows.

Another thing we must consider now is that protection work has developed into a specialized art. It is a trade or a profession, I don't know which. A well trained man is worth from ten to a hundred untrained depending on the job to which he is assigned. Further, this skill, or science, or profession—whatever it is that enables men to cope successfully with fire—is new. Many men have been in it from the beginning. This makes it difficult to teach. The information has never been organized. Most men will say that it is just a matter of common sense, meaning that they use the information which they have acquired over a period of twenty years but which they are not conscious of having learned. Before they can teach it, they must analyze their knowledge and try to determine what it is, specifically, that they know that the beginner does not.

I believe further that we now all agree that any training program should be based on the job. It should train men to do the things that they should do on the job. This requires a careful, detailed analysis of the job to determine just what the man does and just what he needs to know to do it. For example, at training camps I have listened to beautiful lectures on magnetism, declination, north poles and magnetic poles, etc., yet when I'm out in the woods with a compass, I never think of all that, I just take my

sight and read the number where the needle points.

Then here is another little example of what I have seen: many camps teach guards to splice telephone wire. At most—or at least some—camps they teach a method higher than the Regional standard and then accept on the job, work below the standard. Why? Is that the way to get things done? Would it not be better to teach only the standard you want on the job and then require that and accept that and nothing else? I don't mean isn't this theoretically best; I mean isn't that the cheapest and easiest way to get things done?

Another thing that has bothered me is this: I have met in the camps men who have been guards for two, three, or four years and have never been taught the technique (that just means the details of how to get results in the easiest way) of handling a one-man fire. They are wondering to themselves, whether or not they will fall down on their first fire. Now, I have wondered whether you really have any right to entrust the safety of the people's property to such a man.

So is it not necessary to be a little more systematic in our planning of training to make sure that each man learns the things he should know and do, and that we do not spend time on things that he cannot use. Vetter has proposed a system. Possibly it involves too much system for some Forests and not enough for others. I don't believe you can tell just from one reading; it will require study. And I'm not going to ask you to vote "yes" or "no" on any of his forms. You won't use them unless you like them, and anyhow any form should be tried out before it is adopted. That is what we have been talking about in our "administrative studies" discussions. What I would like more is consideration of the ideas back of the forms. For example, take the "training Modes Chart". That looks simple—you just write down the job and check off the mode. But for me that is anything but simple; I've got to consider every detail of what the man should do, what he must know, what skills he should develop, what his probable mental attitude will be and what, considering all these, will be the best method of putting it over, and then how I am going to test him to find out whether he has learned. That is relatively easy for a job such as splicing wire, but not so easy for putting out a small fire or acting as sector-boss on a large one. In the preparation of any training program, these three questions will be continually intruding themselves upon you: What should he do? What must he know? What is the best way to put it over?

Questions

1. You have done in a way most of the things suggested by Vetter, but you have not written them down—not all of them. Is it worth while to make the program so formal? What does it add to or take from? Give us both sides of the story.

2. What has Vetter included that can be left out or that can be better done in some other way? I don't mean by that, the details of proposed forms but the ideas back of forms that the forms are intended to represent?

3. Any other feature of the subject that interests you?

4. Summarize briefly the essential steps—the things that must be done—in the preparation of an effective guard training program.

I should like very much to have your discussions by *April* 1. That will not give you much time as I am late with this number but it will help out if you can do it.

P. K.

DISCUSSIONS OF LESSON NO. 3

One set of discussions of this group have already been published. I know that there is a disadvantage in having the discussions of a single subject published in two pamphlets but this time I have a perfectly good alibi. At the time the manuscript for Pamphlet No. 5 was sent to the publisher, I was in Missoula and had only a few of your papers with me. On returning to Washington I found so large a number of such excellent papers, many of which I knew you would like to see, that I knew I should publish more of them. But even with this additional group published, I still have 108 pages of unpublished discussions.

In Lesson One I asked you to suggest subjects for discussion; in Lesson Three I asked for subjects needing study—research. Most of you got the distinction I had in mind. Some things can be improved through discussion and some cannot—some things require measurements to determine which is best. Your reference to Civil Service examinations reminded me that recently I heard Dr. O'Rourke, Director of the Personnel Council, emphasize the futility of arguing such questions as the best type of examinations, whether an examination is as good as an interview, or whether two years probation is better than one. The discussion gets you nowhere; the thing to do is to devise a test—try the two under test conditions and find out. Now I believe that such a test would prove that two weeks probation would be better than two years. As far as the Junior Forester examination is concerned, all we know is that it has selected for us a fine bunch of men, allowing only an occasional poor one to get by, but we do not know that the "intelligence" test used in the ranger examination wouldn't have gotten us the same results. Neither do we know the number of really good men who have failed to pass it.

It was a surprise to me to see the uniformity of your suggestions of things needing study. More than half suggested reports—grazing reports, fire reports, duplication in reports, use of reports or the whole subject of reports. Another frequent suggestion was plans: Why are plans not more used, what's wrong with our system of planning, etc. Instructions came in for a number of suggestions—duplications in instructions, written instructions, instructions to protection force, etc. And there was one suggestion that the value of this all-service study course needs study. It does. The results of any considerable expenditure of funds deserve consideration.

The discussion of the under-ranger position idea indicates that the position is needed in some places and not in others. The difficulties attendant upon such a position seem fully realized, also the desirability of strict conformity to Civil Service regulations where the amount of work would justify

a position. Perhaps nothing has contributed so much to the success of the Service as the stability given the organization by the Civil Service law. For that, if for no other reason we are for it.

The discussion of Scott's suggestion resulting in a majority approval for the idea, but I'm still at a loss as to how I should do my part in it. Scott has always argued that these courses should lead to definite administrative action based on the ideas developed by the Supervisors in their discussions. But under our form of organization that is not possible. Administrative action must be taken by administrative men and cannot be effected through a study course. Yet that does not prove our discussions of no value. You still retain your authority and influence for action through administrative channels.

P. K.

E. W. HARTWELL

CUSTER

BILLINGS, MONT.

Testing everything, i. e., weighing, considering, appraising, each step or act as a finite move in an infinite scheme where steps and acts are means to ends that in their building become means to yet more distant ends is peculiarly demanded in such an organization as the Forest Service. Without this testing, the human naturally tends to regard the steps or acts as ends in themselves. In an organization this gradually results in the shotgun effect on accomplishment. It puts a premium on the routine worker, discredits the progressive man. This brings waste of public money, of time, of energy—but most important a waste of spirit. This happens to those who have earnestly striven to bring the work given them out of the routine job-holder type, onto the professional basis, into construction of progress along the lines for which the organization exists.

Since our work, then, primarily is to forward principles and practices in scope far beyond the rigambole of reports this proving all things and holding that which is good changes in its bearing on tasks as times passes. Recently initiated "new things" certainly require careful consideration of "method" and some current reconsideration thereof. Of equal importance with initiation of new things is periodic critical examination of the necessity for, worth and method of doing things once "new" lest they be hallowed only in antiquity of requirement. There is, then, a middle course between continual change of method in doing re-current things and the frozen ruts of repeated non-considered routine action. This course gives the greatest gain by the "realization formula" of least total sum expenditure of money, time, energy and spirit.

Specifically, inspection of a ranger station cannot be expected to be motivated by same reason, expected to yield same result or be conducted in same manner every time on each station on every forest. Within the general field of such inspection each such case must bear directly on progress of our purposes and in terms of the "realization formula." This means that the inspectors must have broad, deep and clear cut understanding of the general and case need. Thus will the "standard inspection method" be a useful tool, not a mill stone on accomplishment.

Discussion requested:

1. Shaw's article.

Some comments on dangers in administrative studies included in my Lesson 1 discussion.

Shaw's first five points seem to hinge closely on the assumption that the men in the Forest Service, (for surely those now employed therein have been recruited) are by that fact poorly selected, not the best men that *might* have been obtained, represent errors of retention in the probation period, are failures or misfits. There has been a good deal in that spirit, both within and without the Forest Service, in recent years. It is, too, remarkable how the "poor men" are those who have not attained to some Regional or Washington Office eminence, (through youth, inexperience or otherwise) where 'twere the height of folly to question qualifications, results or all around suitability to the Forest Service. Carrying this tendency to extreme,—the Chief Forester can be the only really suitable man in the organization. Now for points from my own experience and observation. The continued emphasis among the forest schools "that the Forest Service is not getting the best men" tends to bring that to pass in fact by putting a subtle odium on those who try to qualify for the Service as compared to those who pass it up for private, commercial or other professional work. This was the feeling in my day at school (1914-1917) among the students. Would it not be best to emphasize the viewpoint that Forest Service selection marked good men who, upon induction, would be further trained to fit into and serve the organization? That the opportunity for further self-development was great rather than that such efforts marked the dissatisfied, over-ambitious organizationally dangerous man? Another thing, two men may be equal in ability and quality, but one prefers public service and the other private effort. Is the one, then, who chooses life in the public service necessarily a poorer type, a weak sister, because of a choice that may have meant the sacrifice of much personal gain to the benefit of the organization he joins, while the other is the real he-man, the type-we-want, because he preferred private effort? Must we seek barriers to entrance and easy outlets for those who prefer public service while conjuring up methods of sandbagging into the organization those interested in private gain? To my way of thinking, there is room and need for both types. The good man who prefers public service well may be the equal or superior to the sand-bagged private gain type. In the long run, with a forward moving, non-routine worshipping organization the public service soul may be the best man.

Shaw's sixth point will be largely ineffective unless the forest organizations are financed on a basis of giving the Supervisor and his staff men some time in which to obtain training. If organization must be on the basis of 100% routine then not only will progress work be slighted but current training of self and staff will largely go by the board.

B. Temporary force.

If real forestry is ever practiced on lands in our charge most of the detailed work will be done by temporary employees. It behooves each forest organization to build this force well and solidly by good business

management so that they can gradually assume the burden of this forest management work as it develops. But there is a real danger in taking on more "permanent" positions for this type of work. This hazard is in making the Ranger and sub-ranger offices parallel to the present Supervisor and Ranger offices and still have to hire the work done by additional "temporary" employees. This is a real danger in any Governmental organization.

C. Instructions

It is sometimes a puzzle to know which are the superior guiding instructions, Manual, Administrative guide or latest circular letter. Unless carefully supervised in the issuing offices the use of circular letters may well be a major reason for the "lack of knowledge that the average Forest Officer on a Forest has of Manuals and instructions."

D. Reports

Each region has a list of standard reports. Much time for the organization would be saved if these lists were prepared showing by name the forests that need not report. This would vary somewhat as the business varied by forests. By routing all mail over one desk in the Regional Office a "No-report-required" form for each such non-reporting forest could be supplied to the regional office concerned and delinquent forests could be sent "yellow perils" without absorbing therefor the time of the Regional Office overhead. Special reports could then be handled in a similar manner.

E. Inspection.

Inspection—great is the sabotage of time in thy name! Let us have that which is necessary to preserve our attainments and serve as a basis for planned progress. Let us avoid the rest of it—turning the freed means toward further accomplishment of our progress.

2. I would like to see the grazing report re-analyzed. Of course, it is the natural tendency for upper offices to want this, that or the other data often in terms requiring special computation on the forests. Should not the element of such a report be merely data required in the current handling of the range, the forwarded report to be merely check summations with brief illuminating comments? This would free more time for immediate administrative effort on the actual units.

4. *Sub-ranger work position.* Some such is needed. I do not favor a Civil Service position until our personnel policies are more thoroughly "sold" throughout the organization, and might not favor one then. If Forest Supervisors cannot be trusted to use the "probation period" for unsatisfactory appointees how would it work with the, presumably, less analytical Rangers responsible for such new "position" probationers? This is especially acute in communities where the "hire and fire" method with temporary employees involving local people serves to balance the cross-currents of community feeling and family frictions. With "firing" practically eliminated it would be but a short time until a "sub-sub-ranger position" would be needed.

A counter proposition—perhaps without adequate knowledge of the present restrictions of law—is this: Get Civil Service Commission and Congressional sanction, based upon the nature, necessities and Governmental

interest in the work to be done to a special classification—"Under Ranger." This should be filled by informal appointment of individuals chosen without examination by the Ranger but with the consent and approval of the Forest Supervisor. These men should be required to qualify only in very broad items, be subject to dismissal by the Ranger with final appeal to the Supervisor and without the requirements of Civil Service permanent appointee dismissal procedure or blacklisting beyond that of the place where dropped. They should be exempted from the 3-months rule, be allowed indeterminate appointments subject only to continued satisfactory service and have about a \$1200-1800 salary scale with promotions on a combination merit-seniority basis to give both effort incentive and protection from changing superiors. Their appointments might be on yearlong or shorter season basis as local circumstances dictated. They should be allowed to use summer, extra or abandoned Ranger stations as living quarters with minimum deduction for rent. They should be allowed, at their option, the benefits of the retirement-annuity act, perhaps somewhat modified as regards the governmental contribution portion.

In general, men capable of foreman work who enjoy woods work should be given these jobs. Much labor would be done by them but foreman positions on projects in their districts would fall to them when available.

CHARLES D. SIMPSON

COEUR D'ALENE

COEUR D'ALENE, IDAHO

Number 1

While the article by Shaw does not bring out a whole lot of new thoughts, in general I think his statements are pretty well made and give a rather true picture of the situation at present. I think his criticism of our Manual situation is rather overdrawn and I believe he is too optimistic in several instances as to what we might be able to do to improve matters. No doubt improvements can be made in our Manual and other instructions, but I do not see much value in his contention or much chance of putting into effect his proposal of wholesale consolidation of instructions or any considerable reduction in our Manual and other instructions.

Shaw's criticism of our report situation is certainly due but the idea of two or three monthly reports in lieu of our present system does not seem to have much merit. More possibility exists in eliminating unimportant reports, searching out duplications, and eliminating them, and making the remainder as plain and clear-cut as practicable. One of the great difficulties is the constant change in the minor details of some of our reports and report forms. We hardly get the requirements of one report mastered before someone decides that some of the details should be changed. Then the report makers have to learn the new scheme.

I can not agree with him on a lack of study or accomplishment in improving the temporary personnel. If we have made any headway on the fire Forests it has been largely through selection, training, and closer supervision of temporary personnel. In the last four or five years an enormous improvement has been made in this respect.

Number 2

One record at once comes to mind which needs to be studied with the idea of simplification. It is our improvement project record formerly kept on 428 cards but which are now in the throes of transferring to the Account books on Form 21-J known as the Investment and Depreciation Record. When the improvement project record was started we had only a few trunk trails and each of them was known by a name. Then as funds increased we got secondary trails up minor drainages or along ridges and then way trails and foot trails came along. At about this point we found names to be inadequate and had to begin designating projects by number. Also we ran in spur trails and connecting links until our trail map now looks like a patchwork quilt. We now have close to 400 trail projects and we have built up a separate record and card for each including every measley little project. To make it worse, it is now necessary to write off periodically the depreciation on each project. Why is it not satisfactory to bunch all of the trails in a single ranger district, or at least on the main drainages, into a trail system with one sheet or record for that system. The number of miles by classes could be separated, if necessary, and as new trail work was done in the unit we could simply add to the total mileage and total costs. For cost estimate purposes I believe we could get a better record by keeping careful costs on certain jobs or certain miles representing a particular classification or specification for given types and conditions.

Similarly, we keep a separate record of every toilet, every horse corral, or other improvement project big or little. Why not a plant cost for each ranger station or other grouping. Here, again, we could keep accurate records on a few projects such as lookout houses, etc., which would be better figures than our figures are at present. We often find now due to difference in timekeeping or other record keeping that one lookout house, for example, costs \$500.00 while another one only a few miles away costs \$750.00 with no justifiable difference.

Our sanitation and fire prevention fund offers the worst example of superfluous estimates, plans, and cost records. Our records of camp ground tables, fireplaces, registration booths, etc., for each camp ground must be kept by themselves. The result is that an allotment of some \$79.00 S & FP money requires almost as much record work and reporting as a \$40,000.00 trail program.

Number 3

This is a *discussion* course and I am satisfied that Scott's proposal to provide definite questions for "Yes" and "No" answers would tend to dry up the discussion. Better leave it as it is as far as the periodic lessons are concerned. It might be possible at the end of the course to put out a questionnaire to include the principal ideas or recommendations in order to get the consensus of opinion. There should certainly be some follow-up to get into practice the things of real value brought out in the discussion course. After all our talking about them if we do nothing we may as well not have talked.

Number 4

There is some merit to the creation of an under-ranger position for alternates who do some common labor but whose work is about 50% ranger calibre work. However, your proposal is for a strictly work position and I do not favor a year long Civil Service position to get our laborer work completed.

A. Our work is too seasonal and the season is too short. Our labor is mostly on trails, roads, fire control, scaling, packing, and slash disposal, and averages probably 4 months per man with a general range between three to five months. Our average ranger here has 23 such men not including those jobs which are projected. The work does not lend itself to year-long employment and we could not finance the men on a year-long basis since one proposed sub-ranger's pay would carry three, or possibly four, of our temporary employees at present. I see no reason to single out any one or two from each district.

B. The disadvantages of Civil Service appointment more than offset any possible advantages. No doubt we would be hindered in selection of men and we would be bound by a fixed rate of pay. Annual leave and sick leave would need to be granted. Probational reports, personnel reports, and ratings would no doubt be required. Leave without pay and furloughs would make added office work and result in lack of flexibility. We would be handicapped in changing men on short notice if changes were found necessary. We had a good example last December on a winter scaling job which illustrates the advantage of temporary labor over Civil Service employment. The temporary scaler was glad of the chance to work Christmas, New Years, and the Holiday period while it was necessary for some of the year-long men to forego a part of their annual leave and they felt somewhat put out about it. You could not blame them.

C. The appointment plan might result in a lack of promotion for if promotions came along regularly in a few years the man would be getting more than the work accomplished would justify. Some encouragement in the way of increased pay with added service is essential and I believe it can better be taken care of if the man is on a monthly or daily rate.

D. We are undertaking this year, however, a plan which resembles somewhat your proposal. We are selecting five or six men on the Forest to be designated as Forest Foremen and to have a written notice or appointment from the Regional Forester. The idea is primarily to pick, train, and hold qualified men for fire foremen but they will be used as ranger alternates or as foremen on insect control job, road job, planting, or slash disposal. We hope to provide about eight month's work at around \$115.00 per month and then if we have any warehouse work or other winter work we will give these men the preference. It seems better practice to pay these men as well as all other men on sub-ranger work well while real work is to be done and then lay them off for such periods as they are not urgently needed.

FRED B. AGEE

BIGHORN

SHERIDAN, WYOMING

1 and 2. The main difficulty in getting down to a comprehensive

study of the need for certain reports and records is the variety of purposes which reports and records originating on the Forests must serve. Some are intended to supply information desired by Congress and are often a matter of law; some supply information desired by the Forester's office; some information needed by the Regional Offices; and a few are for local use in the administration of the Forest, only.

In considering from a local standpoint the reports required from a Supervisor's office, I have always regarded them as falling into three classes: those desired for information higher up the line, but which also have value for Forest administration in the form submitted; those required for information higher up which have some value in local Forest administration, but which are not in such form as to be of the most use for the latter purpose; and finally those required for purposes further up the line which have no value at all in local administration. In running over casually the list of reports required, and without making a thorough study, I would place 43 of these reports in the first class, 30 in the second, and 54 in the last.

In making any study as to whether a report or record is needed, whether more is being required in the way of information than is necessary, or whether a cheaper standard would not give as good results, it would seem that it would first be necessary to ascertain who wants it and for what purpose, and then go into the matter of what and how much is needed. If the matter were considered entirely from a local Forest viewpoint, with our lack of knowledge of the purposes to be served, we would probably vote for the elimination of all of the 54 reports falling in Class 3. In order to make an intelligent study of the need for a report also, it would appear necessary to know, at least in a general way, how much that particular report is costing the Service and weigh it against the probable values derived from it. Clerks diaries and other records now being kept in Supervisor's office are generally sufficiently complete to furnish Forest costs on the different reports.

The reports falling into the second class also offer a fruitful field for study from a local Forest administration viewpoint. Many of these contain a great deal of useful information, but not always arranged in the form to be of the most use in local administration. For instance, the allotment estimate data submitted to the Regional Foresters each year contains the basic data for the years financial plans. If supplemented in the Supervisor's office with a few summary sheets giving detailed data by Ranger districts, it forms a plan of action that the Executive Assistant or any one else in the Supervisor's office can set in motion, upon approval or partial approval of the estimates, without further action from the Supervisor.

The annual Grazing report is another example along this line. It contains a large amount of data which, if given in a little more detail and arranged by Ranger districts, gives the Supervisor a good perspective into grazing conditions and is of unquestioned local value in planning grazing administration. In this case, in recent years, I have at the expense of an Assistant Regional Forester's time in reviewing the report, inserted the

additional data in the form desired to make the report serve the dual purpose. Probably what is needed are some supplemental sheets that do not go beyond the Supervisor's office. These two reports are cited only as examples.

I believe that part of the dissatisfaction from a Supervisor's standpoint arises from the fact that a large amount of time, both clerk's and Supervisor's, needed for other purposes, goes into reports, and yet many of these reports are of no value to him in administration; that out of it all, there is a dearth of information summarized in a form that would be of most value to him in administration; that it is still necessary for him to go through a lot of records to get the information needed in administration.

There is another angle to the situation. When information is required higher up, usually the office desiring it gives considerable thought to devising an outline intended to give it the information in the form desired. I am not sure that we have kept pace in the Supervisor's offices in trying to get the data in equally systematic form from the District Rangers. The result is that the Supervisor's office gets a large amount of unclassified data which must be systematized and arranged in the form required by the Regional Forester, requiring a great deal of the Supervisor's time to supply the field knowledge necessary to bridge the gap between the District Rangers and the Executive Assistant. It is only a few years ago that there was a tendency to bemoan the office work required of the District Ranger on the grounds that he was primarily a field man rather than to make an effort to round him out by building him up on this part of his job.

All of this discussion may leave the impression that I am in favor of more rather than fewer reports. That is not the case. The only thought that I am trying to present is that we might get more administrative use, with perhaps less expenditure of time, out of the reports now required by going farther in indicating to the District Rangers, by outline or otherwise, the exact form in which information is desired; and that there is also a field for considering the present form of reports to the Regional Forester, with a view to reshaping or supplementing them to make them serve the dual purpose of furnishing information desired by him and information needed in the administration of the Forest.

I do think the whole question of reports is worth a thorough overhaul to see if there are any reports that can be eliminated, any reports that can be simplified or curtailed and still fulfill their purpose, any on which the standard can be lowered and serve the purpose, and any that can be reshaped to fill a wider field of usefulness without material increase in cost of compilation. It is a live subject. Reports are requiring a large amount of time in the Supervisor's offices that can be used to very good advantage for other purposes. I would like to see the subject approached by first requiring a statement from Supervisors' and other offices of the cost of all doubtful or questionable reports, and then consideration given, by committee or otherwise, as to whether the cost justifies the values received from them.

1. I would like to say that I believe Shaw has done a very constructive piece of original thinking in his Discussion No. 3 on Administrative Study. I read the discussion two or three times, finding new meat each time. Several years ago a Junior Forester who has since left the Service and holds a very good administrative position in the lumber industry wrote me to the effect that his efforts to simplify his work always met with great questioning and doubts on the part of his superiors, but that any suggestions which would increase the work, double the detail, and make the simplest matter more involved, always seemed to receive ready assent. This was not made as a criticism, but merely as a passing comment on the tendencies of the Service, and it certainly would seem to be borne out by the increase length and breadth of our reports. I have worked out reports which consumed from \$100 to \$300 of time, counting that of rangers and stenographers, from which I did not feel that the Forest Supervisor or the Forest received anywhere near the comparable useful value. Part of this may have been due to our inability to recognize the opportunity for use, but I am certain that many of the reports could have been completely eliminated without any loss in the efficiency of the work or the usefulness of the Forest in serving its fundamental purposes to the public and the community.

2. I believe that one of the obstacles I have had to overcome has been the change in my viewpoint from that of the so-called technician to that of the administrative officer. After leaving forestry school, it took me several years to realize that while a man might need to know silviculture surveying and the like, from a Forest Service standpoint, it was vitally essential that he be equally qualified from an administrative standpoint along lines in which I had received no training, and it was therefore necessary for me to get in and study in order to round out my knowledge so as to qualify for administrative work.

3. I believe that the Supervisors of Region Six have recently recommended that where a superior officer is not entirely satisfied with the probationer, the probationary period be extended an additional six months in order to give him additional time for observation. This would permit of additional training and would give the slow starter who might be a very good man a chance to prove his worth. I feel that it is vitally essential that the right start in training be made by a new man entering the service. Training schools or courses during or following the probationary period would seem to be an excellent help. The selection of special rangers or Forest officers as training instructors on the job would also seem to be worth while, and is a method followed in commercial practice. It would seem to me that it should be the particular province of the assistant supervisor or some other qualified member of the Supervisor's staff to ride hard on the new man and devote, if necessary, a considerable portion of the field season with new Forest officers. This would not only ensure a start in the right direction, but would also eliminate some errors and the necessity for repeating some work.

4. The Supervisors of Region Six have indicated one of the administrative problems which they intend to study in their recommendations that stenographic assistants be furnished the district rangers during part or all of the year. The average stenographer can write letters in a small fraction of the time which it takes the ranger to produce with the laborous method of one-finger hunt and peck.

For the past several years it has seemed to me that the Forest Service was getting away from the man who does things with his hands. The Manual instructions say that the ranger is the man who does the work, but with the tremendous load of bookkeeping, reports, improvement work, fires during the season, and the like, there is very little that he can actually do. He is more in the nature of a field foreman, rather than a laborer. By the same token, raising our requirements for entrance with regard to education, training, and the like is eliminating the old type ranger or employee who secured his knowledge and training through long years of experience.

I would very much recommend a position of senior patrolman as a Civil Service position at a salary rating of about \$1200 a year for the following reasons: In the first place, we now pay \$600 to \$900 a season for high class woodsmen, who can fight fire, handle men, build trails, telephone lines, and what have you. We get from four to eight months work out of these men. It is necessary to pay them this high wage because of the part time employment. In other words, we are paying them for being idle. The same men would be glad to work year-long for \$100 a month, and I know of no Supervisor who could not use a number of these men during the non-field season or off months in improving stations, building telephone line in the low country, winter maintenance of roads, and the like. These men are largely local men, born and raised in the community, so to speak, and having their ear to the ground, sense and understand the feeling of the local situation, and can help the Service very materially to "get across", for even though the ranger may be a native son, born and raised near the region where he works, his years away at school (if we are going to go to the point where the ranger is for the large part technically trained) cause him to lose to some degree the instinctive understanding and touch of his local situation. This would also provide a means for the man of little education, but exceptional ability, to work on and up through the Service. I believe, therefore, that such a position would be good economics, good psychology, and good for the social structure of the Forest Service.

JAMES FARLEY, M. M. BARNUM

TRINITY

WEAVERVILLE, CALIF.

1. We agree with Shaw's article as a whole. In the personnel case we are inclined to feel that the year's probationary period is ample but that the entrance examination should place more emphasis on practical experience or give it a higher percentage in the rating. The appointee should have been taught how to work before being allowed to enter the service. He could get this by summer work or field experience after leaving college. The Civil Service examinations are gradually favoring the research type and

not always the best administrative men. The present policy of hiring the temporary force seems to meet our needs better than the employment of more permanents. It would be poor policy to sacrifice the number of temporaries for summer duty when so urgently needed for more permanents. Additional funds, if the time of some of the temporaries could be lengthened so as to employ them during the entire field season, would enable us to train and retain better skilled employees but we would not do this at a sacrifice in number of temporaries.

We agree that research in instructions could accomplish a great deal. The literature or volume of instructions appears to be disorganized. It takes a new employee entirely too much time to study and learn all the standards and methods of procedure. This could be concentrated with standards and best practices or methods which have already been tested.

The inspector should devote most of his time studying a Forest to determine the best application of general practices and standards. Then he could give the result of actual tests on other Forests and thus assist in establishing a Regional practice based on research.

2. We favor a study of the Annual Statistical Report, Fire Reports A to M and Supervisor's Annual Fire Report. There appears too much repetition of previously submitted data. In some cases, as the Lands section of the Statistical Report, the Regional Office files are more complete than that in the Supervisor's office and the data can be more accurately assembled. In other words, save time by the report being assembled at the Regional Office and a copy sent to the Forest for checking his file records.

3. We agree with Scott as suggested in the second paragraph, page 12, Lesson 2. By this method we would get a direct service reply without dodging the issue.

4. We are in favor of having an "under ranger" position on heavy ranger districts rather than the present method of a training position being assigned to these districts. The training positions should be on districts manned by a ranger of teaching ability and where he would receive well rounded out training in all activities. It may be difficult to find all these desirable points on any one district and transfers for training purposes can be accomplished without disrupting the organization. The "under ranger" on the heavy districts would have special jobs to accomplish and would be more or less permanent. We believe this position has a place in our organization. The man for this position would be typically a doer or field man, "jack of all trades", though not essentially the office executive that the present ideal ranger must measure up to. We are in favor of a \$1,500 grade for this position. This measures up to the present rate of the better guard or protective assistant's monthly rate of pay. With the readjustment now going on, possibly it will reach the \$1,260 grade but we are inclined to the higher rate at present to attract the type of men to make this position a success.

Three times in the discussions the thought has been conveyed that we are already farther ahead in silvicultural studies than in practice. To accept this as a reason for plunging immediately into administrative studies is to aggravate this identical condition in the activities "that consume the money and cause the grief". It is granted that we have silvicultural information of sorts which we cannot as yet put into practice, but what about the reams of fire statistics, cost data and job analyses which have been accumulated on every forest in Region 7 during the past five or ten years! Do we not have here a great deal more basic facts than we are able to apply? Is not the development of the analytical, experimental, challenging type of mind indicated by Dr. Donald as fundamental for the future, what all line men need now rather than further searching out of basic administrative facts? We cannot progress by the accumulation of facts alone, but through an analysis of them and application of the results. Application of results may reveal the need for more basic facts, but let us put into use what we have first by a planwise approach to our problems both administrative and silvicultural. We can expect no panacea for administrative ills in any mere collection of data. Analysis and action are essential. Much of our administrative job load in the past has been due to this administrative research and we must begin to seek results. Plans are the medium wherewith we can analyze and translate into action.

2. I should like to see the whole system of reports studied. In particular, why not correlate the annual fire report and A-K sheets with the individual fire report. Also why ask for cost of preparedness and prevention on sheet A on a calendar year basis when that information is given in the cost accounting records on a fiscal year basis?

4. I believe that the creation of an under ranger position in the grade indicated is very much needed. As a rule rangers are shifted too frequently for the smooth development of the various ranger districts. From a personnel standpoint, this is necessary, but it disturbs the work with the advent of a new man so that time is lost until the newcomer learns the district and people. A permanent under ranger would tend to lessen the upheaval caused by such a change and result in less loss of time. A permanent under ranger who could act as crew foremen would raise the standard of improvement work by insuring an experienced man available for the work.

H. T. PHELPS

FREMONT

LAKEVIEW, OREGON

2. I should like to see the subject of our written instructions studied and tested. We write too much, too voluminously; we confuse rather than instruct by our verbiage. If we are going in for administrative research, why not start by clearing the slate of a few of the obvious inefficiencies first? Why not condense, simplify and clarify the 47 varieties of written instructions Shaw mentions? Probably one reason is because, as Keithly expressed it in his discussion, we are too busy with our backs to the wall

knocking out the jobs that demand action. But again, maybe these same jobs keep our backs to the wall because we use inefficient methods. These endless written instructions are an example. Handbooks are issued. Circular letters swarm in like locusts in a Kansas wheat field. Soon our source material is such a jumble we can't place our finger on anything definitely and quickly.

To write good instructions isn't an easy job. We talk wisely of being concise, brief and using words sparingly, but few of us know how. What I've written tells you plainly I don't. Someone with a strong jaw, a will to do or die and a broad blue pencil should abridge, condense and delete these written instructions until they say a thing once and well. And we should remember this: if it's said in the Manual, why say it again in the Handbook! and if in the Handbook, why again in the fire plan or project plan or job specifications!

After we have revised our Handbooks and other written instructions, minus verbiage and repetition, then we should keep them up-to-date by making them absorb our circular letters and other current special instructions. In this way our source material could be used in a minimum of effort and trouble.

It is said an executive has to create a smoothly running organization to handle details before he can explore creative fields of thought. This matter of written instructions is only one cog in such a machine, but from the noise it makes I should say it was considerably in need of oil; and by oiling it we may find we have lifted the field man out of a maze of bewildering instructions into the clearer realms of accomplishment and given him another tool to his hand.

All this, of course, is nothing more than system and standardization. A start in attacking this problem has been made on this Forest. Among instructions which have been standardized might be listed the following:

1. Project plans—one form suitable for all improvement projects, with trip schedules. Standard tool and equipment lists, etc., used as reference.
2. Ranger's estimates.
3. Telephone construction and maintenance specifications.
4. Employment plan and personnel record.
5. Standard Forest purchasing procedure.
6. Government truck use, planning and scheduling of work.
7. Overhead expansion for project fires—both fire line leadership and service of supply.
8. A definite systematic plan for making available to rangers, when and where needed, instructions for each particular job of work.

Only a start has been made, of course; but these 8 problems have been thought through, and procedure, system and standards established. All instructions have been kept as simple as possible, with reference, to avoid repetition, to the Manual, fiscal regulations, Handbooks, and ranger's work plans. Results are already evident in easier administration, better financial

control and higher standards of work accomplished.

W. M. NAGEL

BLACKFEET

KALISPELL, MONTANA

4. The sub-ranger job. Is it a case of wondering about Ann's age? Up here in Western Montana, we may prefer to think of her as a sweet young coed of twenty, while down in Arizona or back in the Carolinas she may be a toothless old witch.

My first thought was that it should be an easy matter to decide whether a sub-ranger position is needed. However, upon giving it more consideration I became mired in such factors as volume of work; length of field seasons in various Regions; uncertainty of interruptions due to special hurry-up jobs and critical and often lengthy fire suppression activities; possibilities of organization or district boundary changes which on the one hand might justify the position and on the other hand preclude its necessity; volume of work a sub-ranger could do during the non-field season, which by Regions, may vary from less than a month to the greater part of a year; and last, but not least, the variation in economic conditions in the different Regions and their bearing on the temporary labor situation.

Some of these factors need no discussion since their relation to such a position is obvious. Many who will today vote against the creation of the sub-ranger job were clearly on the other side of the fence a few years ago. As late as 1928 and 1929 some were rather down-hearted because we couldn't get into the logging and milling game and thus furnish some of our temporary men year-long employment. Our motive was not necessarily selfish. We had both the welfare of the men and the Service organization at heart. But for the past two years, and quite probably for some time to come we can be thankful that that one hope did not materialize.

On this forest our field season is about six months. During five of these we employ temporary men. The peak season covers about three months during which period our average ranger district has fifty temporary men and one permanent ranger. Each ranger has a temporary employee called a ranger alternate who assists principally in supervision and inspection in the field. He also has a temporary clerk at headquarters who handles a considerable amount of sub-ranger and ranger work in connection with supplies and equipment, time records, dispatching firemen, and minor reports. In both of these jobs permanent men would be a great asset to the organization, but only during the active field season.

We employ alternates for five to six months at rates varying from \$100 to \$130 per month and board. The clerks are on for a shorter period at rates of \$80 to \$100. One of our alternates has worked for us for twenty years, and two for about ten years, holding the alternate position during some three to five years in each case. We hope they will come back to us each spring, but if not, there is usually some other employee of several seasons' experience who is capable of filling larger shoes.

We need these men in our organization but what in the world would

we do with several of them during the six or seven month winter period? Give me \$1260 per year for every sub-ranger position we could justify and I would prefer to use an average of half of it for a clerk or alternate on a temporary basis and invest the other half in two additional men for the protection force.

No doubt some of you supervisors working under different field conditions can tell a different story. If so I'll be looking forward with interest to your articles.

PAUL G. LUNDELL

ARAPAHO

DILLON, COLORADO

1. Any discussion of personnel management must of necessity consider personnel for that is the material with which one is working, and since the personnel is made up of individuals we should first of all consider the individual; that is in regard to the education and qualifications desired for our work.

Before we can determine what form of curriculum is most suitable for the training of Forest Service men we must ourselves first determine what are the most desirable qualifications for the sort of work which we have to do. When we have determined what type of man is most suited to our needs and what sort of knowledge that man should have in order to be best suited for our work, then we should try to decide what curriculum will most nearly produce the type of man we desire.

Our organization being "The Forest Service" he should be well grounded in the fundamental sciences pertaining to Forestry. This phase of the requirements are I believe covered fully by the present Junior Forester examination, but on the other hand we are I think overlooking other requirements fully as important as the first one.

The nature of Ranger District work is such that it requires the direction of others in the performance of a good deal of that work. This requires intelligent planning, effective use of time and the ability to get others to see your point of view and to do things the way you wish them done. In other words a ranger, supervisor, executive or whatever you wish to call him should be able to have others do work and do it as he would do it if he himself were doing the work.

This requires something besides mere technical training and judging from the course in Forestry, as given at the school which I attended, the forest schools are not giving any direct attention to this phase of training.

First of all I think more emphasis should be placed on English and the correct use of English. We have the problem of handling men. The only way of directing the activities of these men is by instructions either verbal or written. This involves the use of English and if we are able to express our thoughts clearly and concisely, the more likely we are of being able to make ourselves understood and thus secure better work from the ones whose efforts we are directing. Orderly speech habits are conducive to orderly thinking and orderly thinking is necessary for effective planning

and the consummation of those plans.

I believe also that every man should take a course in personnel management, business management or whatever you wish to call it. A course designed to give him some of the fundamental principles and methods of planning. Why not have a course in Ranger District Management for those intending to enter the Forest Service. This could include planning besides giving the prospective employee a more thorough knowledge of the kind of work he will have to do if he enters the Forest Service.

4. I believe a position such as suggested would be practical in certain instances, where there was sufficient work of sub-ranger calibre to keep a man occupied during the entire year. Use of such a man would I think result in better and more uniform work. I do not know that there are many instances where the amount of work would justify the employment of such a man over the year-long period.

This year the Supervisor here is going to try out something along that line in connection with camp ground work and the use of temporary labor. We have enough construction planned to take the time of one man for nearly the entire season. By having one man do all this work on the Forest we should get better work, for that man will be spending sufficient time on that sort of work to become thoroughly familiar with requirements, standards, etc. It will do away with a duplication of instructions by a number of men such as would be the case were each ranger hiring a man to do this work on his district. After a short period of training it should result in the lowering of construction costs for camp-ground improvements, due to the man's more thorough knowledge of requirements and methods of doing the work.

LESTER MONCRIEF

COLUMBIA

VANCOUVER, WASHINGTON

1. Shaw's article brings home the limitations within which the men on the Forests must work. Generally speaking we can do nothing about policies through administrative study or otherwise except as we can analyze and interpret the results of their application. Formulation of policies is properly a function of the highest overhead. The discovery and solution of problems leading toward or arising from policies is a proper field function. The usefulness of our administrative studies will depend on the extent to which we ignore policy and define the problem. We do have leeway in method of applying policies and it is along this line that we must concentrate our efforts.

To be concrete, it is the policy to have instructions for every man who works. That is none of our business—we are getting nowhere to say it is right or wrong. However, we can say if we wish that it is a problem to know how much and what kind of instructions to use with our short term protective force. We also have the liberty and opportunity to test results under more or less, or simpler or more complex instructions. Then when we prove a certain type of instructions superior to others nobody will object to our setting up that type as standard for our use.

2. Protective force instructions are as good as anything to start on—

the short term man's work is certainly pretty vital to the success of our business. Some of us are inclined to be very complete and detailed. No word, no sentence, no pamphlet even that has a bearing on the job shall be omitted from the instructions. The guard struggles along with the sword of inspection over his head, and just begins to see the light as the season sweeps to a close. He has finally discovered what we want from him and that it is possible for him to get it for us: familiarity with instructions. He has finally become passably expert in his job? Oh no, in cramming instructions through a partial digestive process. I claim that system is worse than a complete lack of written instructions and that the devising of simplified instructions to fit the job, the man, and the desired results is a fine little problem for administrative study.

4. The sub-ranger position would boost our accomplishment more than could be done by spending the money for short term increases. We could well afford to cut out a few positions to finance him. When we think of a ranger district and its work and its problems we see it as a certain sized job in the hands of a ranger, perhaps with an assistant. The ranger of course has capable short term assistants but we do not see them at first glance: the responsibility belongs to the ranger and his permanent assistant. Sometimes there may be a short term man who is about as good as the ranger, but that doesn't alter our view. The short term employees, the public, see it exactly the same. My point is that both the apparent and actual weight of Forest Service influence and authority depends directly on the number of year-long men. A district may have a force of 25 short term men. They look for guidance to one man, the ranger. If you add another year-long man, the sub-ranger, they look to him also, no matter what authority the ranger gives him. You have reduced the class from one teacher for 25 men to anyway one for 10 and one for 15. The same applies to the general public—you have multiplied Forest Service contacts by two or close to it. You have increased Forest Service influence and understanding at little cost.

Who would the sub-ranger be? How would we get him? What would he do? He would be the pick of our short term force selected through an examination similar to the present ranger examination. Experience qualifications might even be stiffened to cull out unsatisfactory applicants. Ask any busy ranger what the new man could do. There is plenty he would be capable of. The benefits he would give in the fire season would be big enough that non-field work could well be stretched to cover building improvements and similar items for which sub-allotments might sometime be possible. Give that key short term man a year-long civil service job, a chance to become acquainted with our outfit through continuous contact, and he will give us not short term but ranger results, no matter what we call him, nor how little we pay him.

DISCUSSIONS OF LESSON IV

This is the number in which Bruckart and Moncrief discussed non-technical studies in protection and Clark discussed non-technical grazing studies. Their papers emphasize the distinction between discussion and studies that we tried to make in Lesson Three. In discussing that lesson, I said that there are questions about which it is useless to argue and others about which we may learn from discussion. We may discuss a question about which we have learned something from experience and thereby learn from each other's experience. But it is useless to argue about how tall a tree is or how many miles you get to the gallon. The only way to settle such questions is through measurements—tests. It seems to me that this is the type of question discussed by Clark and that, the method he had in mind for "the elimination of ineffective jobs". We have discussed from the beginning of time, the relative values of three inspections, or two inspections, or four inspections (and some of you still want to discuss it) but where did we ever get with it? The only way to find out is to test one against the other. Clark was accused of disregarding standards, but that is exactly what he did not do. He was not satisfied with the standards so he got permission to test some of them. When the tests showed improvement in quality or equal quality with less work, new standards were adopted.

And are there not hundreds of things that can be settled only by tests? All that is required, usually, is someone curious enough to want to find out. For example, there has been a lot of discussion as to whether a road should go over a hill or around it. Not long ago the R-5 bulletin published a story by a man who was curious enough to want to find out. He found a place where one road went over the hill and one around so he loaded up a couple of trucks and tested their relative efficiency.

A year or two ago some inspector criticised the work on a certain fire because plows were not used. That started a discussion. Some claimed that plows couldn't be used, that it was too rough and that they would cost more anyhow. Others said that it was an easy plow chance and that it would cost almost nothing by that method. The Regional Forester told them to quit talking, get a plow, build a line parallel to the one built by hand, and find out. Now they know.

But tests are not always easy. As Burckart and Moncrief pointed out in their paper on page 6 the human factor is a variable that it is hard to control. As they say, the development of tools is easy because the results are easily measurable. The problems which they list on the same page, as being important involve humans and are therefore difficult but not impossible. Measurement methods must be devised. The subjects which you proposed are equally difficult—most of them. Many of you proposed either reports, records or plans or some phase of those subjects. It is relatively easy to test a standard, more difficult to test a form and still more difficult to test a record or a plan. It was said in more than one discussion that plans are not used or not used effectively. How else are we going to learn to make the type of plan that will be used because it helps to do the job except

through studies involving tests—the measuring of the results of one as against another. Many of us have curiosity enough to want to do these things, but when we are asked to propose studies, we suggest that somebody count the rings on a stump. That is all right if you really want to know the rings on the stump, but I wonder if this year any of you will propose for study any of these problems that are worrying you and about which you would like so much to know the answer. Some of the little things you will test on your own without saying anything about it. Unfortunately this study course cannot authorize studies.

The discussion of organization indicates that most of you prefer to stick to the old form, although quite a number would like to experiment with modifications. Well, why not? P. K.

A. H. ABBOTT

CABINET

THOMPSON FALLS, MONT.

Seemingly, we are possibly not giving enough emphasis to the “service to the public” side in our discussions. In all the administrative studies I have noted, ranger plans and what not, service to the public, i. e., meeting the needs of Forest Users, have been ignored to a considerable extent. The present ranger district system has this strong point, it facilitates contact with the public to a degree no central office for a Forest could possibly reach. And, really, in the end good results are obtained. It is doubtful if a central organization handling a Forest will work up co-operation comparable with those districts where the ranger has become a part of the community. And can we afford to overlook this essential element in our administrative studies?

SAM R. BROADBENT

CHOCTAWHATCHEE

PENSACOLA, FLORIDA

Don't be too hard on the J. F. for not taking a Business Management Course. If the Forest Service wants men to specialize in Business Management, why doesn't the Forest Service send 20 men a year to school and pay the bill? The Navy does it with Academy graduates, who will enter their Supply Corps.

In answer to question 1. Get me a method whereby one man can accomplish two men's work. If you remember four years ago when we had a most enjoyable three days together around the Unaka, we discussed many things, and now Scott tells us (this was one thing we discussed) how his predecessor did not do this, and he (Scott) did, and it's a ten to one shot that if Broadbent succeeds Scott, Broadbent will say the same thing, and if Keplinger succeeds Broadbent, Keplinger will find many failures of Broadbent's. Why all this difference in points of view relative to objectives? Can Administrative Studies help in this?

I believe that consolidated Ranger Districts will eventually mean “Specialization”. The Osceola Forest will have “functional Rangers” in spite of itself, as the work load increases. The same applies to the Ocala. This, I believe, is due to the accessible character of the Forests, and the fact that

they are relatively small in area.

Is it not possible that one type of organization will not apply to all Forests, due to variations in topography, accessibility, and character of work? I also believe that when we think of this type of organization we are inclined to think in "Rangers" when in many cases "Under-Rangers" will fill the requirements of many of these positions. If we think of Rangers we think of \$2,000.00 per annum, which is appalling!

ROY A. PHILLIPS

NEZPERCE

GRANCEVILLE, IDAHO

1. I don't know. The more I study the proposition, the less sure I am that I am on the right track after all. Why is it that we set up standards of performance? For instance so many inspections of protection points are required each season, and the ranger religiously sets up two or perhaps three inspections for each position in his plan of work, although he knows that certain men can get along with one or perhaps none at all. So on down the line with grazing, special uses, timber sales, etc. We set up plans that we know at the start will not work out, perhaps simply for the reason that we want to be in right with the inspector, who, in using his check list, finds that inspection has or has not met with the requirements set up. Why not let the situation suggest the action and base each individual case on its merits. When I visit a lookout station I am not concerned as to whether the ranger has been there at all. The fitness of the lookout man for the job, and his ability to perform is all I am concerned with. In range inspection the condition of the range is all that needs to be known. Yet we keep setting up false standards and doing things the same old way, not so much, I believe, a matter of habit, but as fear of criticism or censure. It is the proposition of ordering 100 men for a fire where 25 might be ample; failing to count stock and find 100 head cattle in trespass; neglect to visit a timber sale operation often enough and find that a tricky operator had cut and removed timber in excess of payments, and things of a like nature that muddle and handicap the functioning of administrative planning.

This brings into the foreground the human relation phase of administration and it is clearly an all important one. The ability to size up men should rank first in the qualifications of any administrative officer. Forest officers who have had to select overhead out of a crew of fire-fighters can appreciate just what this means, and I know certain men who are almost unerring in selecting crew bosses and even cooks without any previous knowledge of the man, while others can scarcely make a good selection without considerable contact and investigation. In dealing with the public, only too often we find one of two kinds of administrators; the one who considers every man a crook until he has been proved honest, or the other who believes every man honest until he is proved crooked. Neither one is usually very satisfactory, but every organization has some of them.

I would like to be more efficient than I actually am and realize that much of my work might be more efficiently planned and performed. How near should a man's work approach mechanical perfection? Perhaps the

most important thing is incentive—what is the reward, if any, for efficient work? We have a top-notch ranger holding down a tough administrative job, he works hard for a long time and then starts to slip. Perhaps there is no incentive, the road is dead ended ahead of him. I believe that each one of us can carry the burden if we can but inculcate that heads up, fully alive, aggressive spirit that is necessary any place where progress lives. As an organization, I fear that we have arrived at a state of stagnation in some respects.

2. There is probably no question that will create as many differences of opinion as this one. Checking back over the history of the Nezperce, I find that its 1,300,000 acres originally comprised one ranger district. By 1910 eight ranger districts had been created but were later reduced to four. The other four rangers worked as specialists out of the Supervisor's office, so the force was not decreased thereby. There are now five ranger districts.

Without question, the closer a man is to his job the better the results are. Perhaps the most rapid strides were made in our public relation work under the regime of small ranger districts. Put a man close to his public, let him pass the time of day with them and break their bread now and then and he is bound to become one of them and he can get farther in selling them the gospel of forestry in a minute than an outsider can in a day. One of the most persistent criticisms of the Service by local people is the transferring of men and the difficulty in contacting and even getting acquainted with the ranger. It is about the biggest field of human relations that we have and often one of the most neglected.

Put a man close to his work and the better the finished product will be. When we have a large timber sale or a large improvement program, it is customary to put it on a project basis. Why not handle the job from the Supervisor's office; it is entirely practicable. Perhaps for the reason that when we want a first class job it pays to keep a man on the job. Yet we put a ranger in charge of an area of say a half million acres and expect good results in administration although we must admit that he is a pretty good man if he gets over the ground once a year in a hurried fashion and perhaps does not see parts of his district for two or even three years from the standpoint of a thorough-going inspection.

We all know that even an average fire season upsets a plan of administration to the extent that grazing allotments are not even reached by an inspecting officer and much other important work is neglected for the reason that rangers and the supervisor's staff are spreading themselves too thin.

I am firmly convinced that we cannot hope to cope with any situation unless we have the machinery for the job set up on the ground, figuratively speaking. Take the biggest job we have, the fire job. When we have the nucleus of fire crews, foremen, strawbosses, timekeepers, etc. trained and available in the Forest organization, then, and not before can we hope to be efficient as firefighters. It stands to reason that the smaller the ad-

ministrative unit, the more efficient the organization is going to be, and the more fires will be gotten in the first burning period at small expense, and the less the need will be for spectacular action by flying squadrons remotely located from the scene of action acting under the direction of some one not entirely familiar with conditions on the ground. It has been my experience that trained men on the ground familiar with conditions are far more valuable and much more efficient than equally qualified men brought in from the outside, but who are badly handicapped by a lack of understanding of conditions at the seat of action.

ANDREW HUTTON, EDW. WRIGHT SAN JUAN DURANGO, COLORADO

The progress outlined by Supervisor Bruckart and Assistant Supervisor Moncrief does not indicate that there is any real need for laboratory studies in the fire game. With all the progress outlined there certainly must have been considerable progress in personnel, altho the article leads one to believe that there has been little personnel advancement. All advancement is due to personnel advancement directly or indirectly.

Study as you will, you cannot make forest officers perfect. Moncrief and Bruckart state that fires will get big because of human failures. They always will, for the same reason that 30 per cent of private businesses fail. (See previous lesson). Having as an objective the elimination of human failures is entirely too idealistic. Such an objective can not be attained. They can and should, of course, be cut to an absolute minimum in so far as possible.

Personally, we do not believe that we need be especially worried about "blow ups". They need to be held down, but as an organization, the Forest Service is comparatively young. Years before anyone ever thought of a Forest Service fire chiefs in cities and towns devised ways and means and patented equipment to reduce fires in cities, yet fires still occur and occasionally they have a blow up. Experience has shown that big fires cannot be eliminated. We believe that regardless of any progress in human efficiency big fires will always occur under certain conditions. We believe also that it is our duty to increase our efficiency as much as possible.

The majority of the questions propounded in the Bruckart-Moncrief write-up can not be answered. The answers to most of them can only be determined through actual test and there are so many varying conditions that it is doubtful if some of them can ever be successfully answered.

No one can logically argue against Clark's statement that our two big jobs are the elimination of ineffective jobs and the determination of the best way to do things. To solve these two problems has been the aim of master minds since the beginning of the world. What are ineffective jobs? Can we all agree that certain definite jobs are ineffective? Those of us in the field think many of the jobs that we are required to do are ineffective, yet the men who require us to do them no doubt think they are effective and necessary or they would not require them to be done. True we are required to do some things which are simply "nice to have" and we require

others to do the same. We are willing to wager that Clark right now is doing things and requiring his men to do things which, in the opinion of others, are absolutely ineffective and a waste of time.

The same argument applies to the "best way" of doing things. Can we agree on the best way. Surely, on some jobs, but many will always be open to argument.

We agree with Clark that we should attempt to eliminate ineffective jobs and do all things the best way, but maintain that the objectives are again idealistic.

Clark cites some excellent progress in the saving of time during the peak season on the Rio Grande. The fact that time was saved, however, does not tell the whole story or solve the problem. What became of the saved time? Was it used to advantage elsewhere. Did it just cut down the rangers time, or did it unnecessarily bulge some other activity? Did it reduce forest expense? The mere fact that the time was saved from one activity does not spell progress unless we know how the "saved time" was used, how costs responded, etc.

Clark says "We are no longer interested in how best to perform jobs that are purely the products of traditionalism." There are times when old traditions are efficient or profitable and there are times when they are not. What we are concerned with is to be able to recognize genuine antiques when we see them. "Traditional" jobs may or may not be ineffective and worthless.

Clark cites a number of "time savers". Every Forest can do the same, and covering more years simply means more time saved. Not so many years ago there were eleven rangers on the San Juan. In the field season of 1932 we expect to have six. With an average of 300 days per ranger the San Juan has saved 1800 man days, yet that does not prove whether the forest is being any more efficiently or economically administered. We must analyze further to get the whole picture.

Many forests can cite Clark's examples of time savers, especially the ones on scheduling sheep and having grazing reports compiled in the Supervisor's office. The reduction of the requirement from three to two annual range inspections was done so long ago on the San Juan that even the old timers can not remember when it happened. We are now attempting to get away from inspection entirely and substitute field supervision or field management. We have had too much "inspection" and not enough results therefrom. We must not worry about time used or saved so much as we must about results gained or progress made. Much time, high costs and considerable progress may be more desirable than less time, lower costs and less progress.

Clark's third example, that of reducing capacities to eliminate "range trouble" seems rather far-fetched. We are inclined to believe that the cuts in capacities were actually made for other reasons and that reduction in "range trouble" was a result rather than an incentive or reason for the cut.

No doubt every forest can show much time saved, but let's not kid ourselves into believing that the elimination or reduction of jobs to save time, necessarily spells progress, advancement or increased efficiency until we know how the "saved time" was used.

As for P. K.'s suggestions for discussion we have only the following brief comments to offer:

1. We need systematic study as well as methods and means of measuring results.

2. In our opinion it is absolutely impossible to answer the second suggestion. Who knows what the best organization is? We have never had but one. We cannot know that it is the best until we have tried others. To analyze the work on any Forest and attempt to fit it into some other organization scheme would, in our opinion, be a waste of time. It would prove nothing. Try it out. Take one or more Forests, reorganize on an entirely different basis, eliminate ranger districts, put a good practical business man in as Supervisor and give it a trial. That, in our opinion, is the only way to determine the best organization. We cannot prove anything by opinions—we need facts.

J. R. BRUCKART. LESTER MONCRIEF COLUMBIA VANCOUVER, WASH.

1. Few forms of work probably need systematic organization to produce best results more than research. Two fundamentals should be kept in mind in arranging a program of studies in administration: the work should be distributed widely among the field force—the men who have the problems; and the work should be tied together and directed at the top. Both these points are believed necessary to fullest progress. It is recognized that past major developments in this field has come without participation of the field man: administrative work plans, partitioning the ranger's job among road, recreation, and fire specialists and revision of accounting system for examples. Perhaps certain big defects can be easily seen from the top. Certainly any BIG defects can be seen as well from the supervisor's location. And doubtless many apparently smaller weak spots are more visible from the bottom than from any other place.

With these points in mind the following organization is suggested. The supervisor's through conferences with rangers and staffs would decide on the most pressing administrative problems for their units, giving them an order of priority. Regional offices would assemble the recommendations perhaps with a working committee of supervisors. The Forester's office would review the Regional findings, taking out certain items to form a Service-wide program. Likewise Regional programs would be made. Assignments to Regions and Forests and construction of working plans should be based on field preferences and ideas. The actual work must constantly be headed by the superior offices to maintain continuity and orderly progress. The Question Marks would then be all of us, the workers would then be all of us (including even the regular research organizations), and

system would extend throughout the whole structure. Many workers doing in a coordinated way the jobs they felt a personal interest in doing should speedily produce results.

2. The tendency toward specialization of work might seem to point to the eventual elimination of the district ranger position. Experience as a teacher, in spite of the slurs that have been cast upon it in this course, is of the greatest value in indicating that the ranger district form of organization is effective. No need of change is apparent. Certainly the fact that it has been unquestioned for 26 years does not indicate such need.

We started on the course of staff specialists for some of the district field work because the volume became too large and the specialization needed so great. It was easier to put in the road or recreation man than it was to enlarge the ranger's force and train him in the specialty. There is a temporary character to this tendency though that is difficult to keep in mind. The road man's work for instance is already petering out on some forests. When recreation population becomes fairly stabilized on a unit, public service work will change from 90 per cent development to 90 per cent administration and the ranger will be able to take it back. It is conceivable that fire problems will be some day so simplified through completion of public education and perfection of organization that the fire specialist can turn his part of the job back to the logical man, the district ranger. It is admitted that there may be exceptions. A project sale probably has features separating it from ranger district work which will always make it more desirable to conduct it direct through the supervisor's office. The ideal from the standpoint of efficiency and simplicity of organization is to give the ranger complete control of all activities in his district. The Service has tenaciously held to this idea and has delegated work to specialists only because of necessity. The setting up of constantly higher standards in itself does not imply the need for more specialists. It means only that the ranger job must keep pace. The specialist is sometimes necessary for development but it is not conceded that he is needed for administration after the development spurt has ended.

3. R. E. Clark's article opens up the question of what our position should be regarding standards. He is pretty convincing that he did jobs as well as was required, yet did them more cheaply than they had been done before. We give him a big hand. What was the secret of his success? He ignored standards. What would be the result if we all did that? Utter confusion and lack of progress eventually. Some units might run smoothly but variations from the average would be great. Costs against an activity in one place would be multiplied several times in another similar place. Some executives would save time on one thing in order to spend it on a hobby.

We must have standards—they are the basis of our organization. Standards moreover must be explicit. A generalization like "Do your grazing job efficiently" will not insure results of comparable quality. An average specification like "Inspect each guard according to the outline

monthly" does lead to a quality level between units.

Clark's paper points to the need of overhauling standards. If he can do what he claims, then forests with problems similar to those on the Rio Grande should have certain standards changed to permit them to make those savings "Legally". The defining of those changed standards should be given the status of an administrative study. Then such work as Clark did would be on a proper basis to furnish widespread results. This should prove a fruitful field, for every executive is now forced to do certain jobs inefficiently just to remain within the law of standards that are spread too blanket-wise.

4. The review of "Improving Employee Relations" outlines an idea of discovering employees' reactions which at first glance appears to be desirable to employ on a Forest. The force is so small however that the application would be very limited. Strictly impersonal data would be difficult to collect.

CHARLES D. SIMPSON

COEUR D'ALENE

COEUR D'ALENE, IDAHO

1. In commenting on Shaw's proposal to draw up a complete, systematic plan for administrative studies and assign various phases of the study to different units, I ventured the idea that more would be accomplished by allowing each member to select some phase which particularly appealed to him. The idea of reporting to P. K. was also mentioned. As a result of subsequent discussions and further considerations I see that it should not be his job to head up such studies and that real correlation is necessary to avoid duplication and scatter-gun results.

About two years after the Regional Forester's meeting the "encouragement and guidance" committee has not made itself audibly heard or noticeably felt. It seems that each Region could afford a full time man to get something under way. I wonder if each could not carry such a man by a readjustment in the Regional Office force without creating a new position. The Research office in this Region boasts some thirteen members exclusive of clerical help. If we had a free hand in using research funds one of these positions would surely give greater results by assignment to the administrative research but such leeway is not authorized by law, I presume, and it might not be feasible to secure the necessary congressional approval. This Region has recently added a man to Operation to lead out on ranger work plans and possibly it is planned to use him on administrative studies part time. The two are well adapted for combination.

Instead of his actually doing the studies himself he should review the field, ascertain the most urgent needs, draw up a comprehensive plan and assign certain studies or parts of studies to the various units or field officers. Included in this I mean Supervisors' offices too as there is as much opportunity for profitable study of our office work as of the woods end.

J. W. HUMPHREY

MANTI

EPHRAIM, UTAH

1. According to Mr. Putnam the mental attitude of the worker is perhaps the biggest single factor governing efficiency. Just what factors influence morale; in fact, just what is morale? Every member of an organization may be loyal to the other members; they may all be interested in the aims of the organization and yet, they may fail to make the progress possible as individuals and perhaps for the organization as a whole.

Morale, as we generally accept the term, may not be altogether necessary for the best results. Oftimes the best work and the greatest accomplishments are brought about in an organization where the supervisor or manager is camping on the trail of his men all the time and checking their work to the minutest detail. In such cases the men may not fear the boss, however, they are taking no chances on losing their jobs and may work to better advantage under these conditions than they do where they feel that their work is reasonably satisfactory to their immediate superiors.

In sizing up the work of men holding positions in the Service similar to my own, I have always been impressed that the Supervisor who was the hardest driver and the most cold-blooded, is the man who succeeded in making the greatest development of his subordinates. There is a danger however, that men working under this kind of a strain may decide to give up and as they feel themselves slipping, may try like Samson of old, to cause as much trouble when they go down as they can and the seeds of dissatisfaction they sow among other employees and forest users may have a very harmful effect on the organization.

The method followed by the Western Electric Company in finding out just what the undercurrents in their organization are may work to good advantage where the results can be measured in dollars and cents. In the Forest Service, however, it seems that there is less chance to secure worthwhile results from following such a method, since our standards of measurement are much more in the abstract. There is also a greater chance for "defense reactions" to be injected into the question than there is in ordinary business.

J. F. CONNER

HARNEY

CUSTER, SOUTH DAKOTA

1. Administrative Studies have been going on for the past twenty years and during that time much progress has been made. The progress we have made has no doubt been the result of administrative studies, although we were not far enough advanced to call them such a dignified name. We thought of them merely as being a result of more practical experience. Personally, I think this idea of every one being a human question mark is the "bunk" and believe that any one who will sit down and seriously consider it a few minutes will agree. What Supervisor wants every forest officer under his supervision to question every decision he makes or instructions he gives out? How long do you think a Supervisor would remain in charge of a Forest if he questioned every decision made or policy handed down by the

Regional office. Each office wants constructive suggestions, but not a policy of questioning every job to be done.

As we look back over the past ten years, no one will argue but that much progress has been made, but there is still a long way to go. I believe much progress would be made and time and money saved if every officer whatever his rank, would give a little more consideration to the time that will be consumed in its preparation, the future use to be made of the data, before sending out instructions for a report.

The present cost keeping system if properly used, should be helpful in bringing to light the cost of some such reports and tend to bring about the discontinuance of any that are unnecessary.

2. The staff organization on a Forest has some advantages but I believe these are entirely outweighed by its disadvantages. I do not believe we are ever going to do away with the ranger district as a unit of administration, but believe that within the next few years there will be a marked trend toward larger Regions, larger Forest units, and larger Ranger Districts. The district ranger will be better trained and have more authority and the manual labor which rangers are required to do today, will be performed by lower salaried men.

B. C. SATERBO

SNOQUALMIE

SEATTLE, WASHINGTON

1. We have inspectors from various departments of our service who are painstaking, capable and enthusiastic. These give the administrator of the unit or sub-unit "encouragement and guidance". The more capable and earnest the inspector the more over-emphasis on his specialty. It would appear then that what we need is a coordinator. If as Mr. Clark suggests "use" becomes the test of value and we have guidance from one who is not attached to some special activity, nor personally concerned in the accomplishment of certain objectives, then we should be all set for a real study of any unit chosen. Under such condition I believe the men on the job would develop powers of observation and critical judgment to an extent surprising even to themselves. Much of the actual "fact-finding" would be done by the local men without any great increase of work. The added interest would more than make up for the extra efforts.

2. To attempt to answer this one, by one who has worked only on one forest appeared to me as presumptuous at first thought. This forest has a "Line and Staff" organization and it is hard for me to imagine a forest where a pure "Staff" organization could function successfully. Among the many activities that are covered by the ranger there are no doubt some that would benefit by being looked after by a man whose interests are centered on but one or two activities, but how about the temporary men trying to serve two or more masters. The men on the job would seem to need a centralized authority who was on the job and who could coordinate all activities. Some forests may have the supervisor's headquarters so located that his office could function in that respect but not so on this forest. Then there is the question of the contacts with local ocooperators and organiza-

tions in the community. The value of having one man in a community who represents the service to the public is difficult of appraisal, but I think we are agreed that the value is great. This contact would be lost under a pure "staff" organization. Would any staff officer, save during a long stretch of years, become so well acquainted with local conditions of fire hazards and the terrain to be covered as the ranger on a district? To the staff officer who is rapidly promoted and his present job is but a stepping stone there is of course incentive enough for good work, but to the man who must stay on the job for many years the rangers position offers inducements that can never be had by the staff man. The unit is his. He has seen it develop and can plan for future development. The community is his, he is part of it and he is respected as a citizen and neighbor. Centralizing the activities in one job makes a job big enough for a man's best efforts regardless of other incentives. Some modifications can no doubt be profitably made but the location of the supervisor's headquarters would in most cases be the determining factor as to what can or cannot be staffed.

C. C. HALL

SANTIAM

ALBANY, OREGON

2. The question "The best possible organization for a Forest—What is it?" has been answered as far as we are concerned by the putting in effect of a central control system.

We have probably the same organization of permanent employees handled in the usual way during the non-field season, but when the work is extended to the field and fire danger as well as the efficient handling of the maintenance and construction crews have to be considered the central control system is placed in effect. Our most experienced field man is the center of the organization and is connected by wire with all the crews and permanent and temporary employees from his central location in the field. He is constantly at his station except as relieved by the Supervisor for short periods during the active season.

The whole burden of fire protection is thus centered in the one man most fitted to handle it from the standpoint of experience, judgment, and general ability, centrally located and whose experience and advice is available to every member at all times whether day or night. This man is constantly and in direct touch with the rangers except when they are traveling or are out of reach of the telephone; always in touch with the firemen, look-outs, construction foremen and in fact all of the members—both permanent and temporary. He is responsible for receiving reports on fires and for action taken. His maps and charts show location of the different men, crews, transportation facilities, supplies, etc. His knowledge of the country enables him to instantly use the most available means for fire suppression. The Ranger, who up to this time has been free to go about his work of grazing supervision, guard inspection, or training, or whatever work he may be employed upon, is picked up and sent to any fire needing his attention or assistance, and is free to concentrate on that fire, knowing that other fires will be taken care of and that if his services are more needed elsewhere

he will be informed without delay. Thus it is that the best efforts of the best and most experienced men will be concentrated where it is most needed. There is no delay in securing help from other ranger districts; if needed the Central Control Chief swings the men, supplies, trucks, and pack trains in as required and all the time is figuring in advance as to where more men and means can be secured if necessary.

The operation of this organization takes the time of one man exclusively, but it frees the district rangers and enables them to accomplish a great deal more work as well as keep them available for the most important work, and is a center from which information and advice can be secured at any time, night or day.

The central control chief is familiar with all lines of work and as such is in position to directly assist the ranger in quickly adjusting matters pertaining to any of the different lines of work.

A breakdown in machinery on any road project is quickly adjusted by the ordering direct of repairs, supplies or what-not, and during the adjustment under his direction the men are employed with the minimum of loss to Uncle Sam. In the absence of the district ranger or where he can not be reached such questions of trail or way locations can be answered and adjusted until the ranger can get on the ground. Questions pertaining to all lines of work are answered and much correspondence with the supervisor's office and loss of time and delay incident thereto avoided. There is an advantage in adjustment of matters by the central control man besides the time saved. It is estimated by the Supervisor's office that correspondence with the field men was reduced one-third by use of the system. The period of 10 years, 1921-1930 inclusive during which time this system was used show some very interesting figures as compared to a previous 10 years:

Period	No. Fires			Total	Acreage Burned	Cost of Supp.	Damage in Dollars
	A	B	C				
1911-20	176	68	43	287	25589	48751	60650
1921-30	260	56	9	325	4590	33995	26058
Difference	°	12	34	†	20999	14756	34592

°84 more Class A period 1921-30 than 1911-20

†38 more fires of all classes period 1921-30 than 1911-20

In spite of the fact that there were 38 more fires during the latter period, there was a greatly decreased number of Class C fires, acreage burned, cost and damage.

A. F. HOFFMAN

MONTEZUMA

MANCOS, COLORADO

1. What is needed to facilitate administrative studies is probably only a command to start them. One thing that can be done is the laying down of a policy that any Supervisor will be granted permission to do away with any methods that are not effective on his Forest and to discontinue activities that are no longer productive, if he can show the Regional Office that his ideas are right. This system is already followed to a certain extent and if

encouraged further will result in causing more administrative officers to dig for better ways of doing the job of National Forest work. The new cost keeping system is going to show that some of our activities are costing much more than those activities are worth and when that fact is brought out we are going to give more serious consideration to adopting ways to bring about a change.

2. I doubt very much that a better scheme or organization for a Forest can be arranged than the one that consists of a Supervisor's office and ranger districts. If we adopted a scheme of having a central headquarters for each Forest and having all of the officers that are attached to that Forest work out of the central headquarters, we would probably get the visible work done with fewer men and apparently at less cost. Our improvements would be kept up, the roads and trails would too, but how about the things that we have to depend on others to do for us?

We now have ranger districts with a Ranger in charge of each of them. The Ranger, in most cases, knows everybody that lives on his district and he at least knows all of his permittees. He is familiar with the individual problems of his users and the communities and the need for particular handling of the various parts of his district. He can discuss in an intelligent and effective way with the permittees and residents all of these problems and needs. Because of the detailed knowledge of conditions and of the characteristics of the people, and the fact that the ranger and the people are well acquainted with each other, the ranger makes frequent and effective contacts with the users of his district so is constantly able to keep them informed and lined up. It is because of this arrangement that grazing permittees see the advantage of and adopt better range management methods, cooperate in construction of range improvements, and all of the users of the Forest see the benefits of keeping the watersheds from being burned over and so cooperate in the prevention and suppression of fires. These are only part of the benefits. The ranger district system enables the Forest officers to get the users and residents to assume the proprietary interest in the Forest that they should have and without their help we would never be able to give the Forests the protection and administration that they are now receiving.

With men working out of a central headquarters there would be such a lack of understanding of the whole situation, on both sides, that the losses that would result because of lack of cooperation would much more than offset the monetary saving that would result in reducing the size of the Forest force.

JOHN W. LOWELL, A. C. ADAMS

BITTERROOT

HAMILTON, MONTANA

1. In order to facilitate management research or administrative studies there should be some responsible co-ordination and correlation of the work in order to head it in the right direction and develop the greatest good out of it. This should naturally come through the Forester and Regional Foresters heading up this work and passing certain responsibilities for accom-

plishment down through the Supervisors and Rangers.

There are but two general methods of prosecuting administrative research. One, by having every Forest making the same study at the same time, or the other, by using a selection system and having one Forest or groups studying other phases. The first method would be too slow and expensive; the second method would make results of research more promptly available for use and more flexible in its scope. It would, in a measure, be similar to securing sample plots in timber or grazing areas to determine quantities, qualities and values of various phases of our work. Forests intensively concerned and others only incidentally involved in certain phases of work could be included in groups to get variations. The Supervisors and rangers should take part in these research projects, since a part of the values of the studies that are being made are secured by the individuals in digging out the facts.

2. Facts convincingly indicate that the line organization is the best form for the management of a Forest. It develops the responsibility of the manager of the unit and is a greater incentive for effective and economic management. It develops men for higher responsibilities and fits them better for all phases of work. It trains men while on the smaller jobs and prepares them for the larger ones. Inject the staff man or specialist, except in highly technical phases, and we weaken the performance of the unit manager by removing the need for him to concern himself directly with this problem and handling it.

There are variations in the size of the job on the ranger district, for example, but this should not be measured by the area of the district but by the volume of business in it and the degree of intensity to which it must be handled. We have a case where we had two district rangers on an area of about 430,000 acres, the principal job being fire control and having no going timber sales or grazing. These districts were combined under one ranger with an alternate and headquarters guard, thereby saving about \$2000 a year. On another district of about 200,000 acres timber-sale business could conceivably be increased to the extent of causing an overload. Instead of assigning a timber-sale man in charge of this work on the district and relieving the ranger of this activity, it would be far better to reduce the size of the district to the extent that the ranger could handle the work in it. In effect, it would give the ranger an opportunity to redeem the responsibility of an increased job load in a certain phase of work and yet would not decrease his responsibility as the manager of his unit even though it is reduced in size.

We have had the ranger-district form of organization practically ever since the Forest Service has been in existence, and while that may not mean that this form is altogether right, it does indicate that there must be considerable merit to it, otherwise it would not have survived so long. Changes in form have been, no doubt, studied, planned and proposed, but the old form still remains as evidence of its superiority and the absence of another form to replace it would prove that the present one is more effective and

economical.

P. V. WOODHEAD

ROUTT

STEAMBOAT SPRINGS, COLORADO

1. It has been pointed out that a lot of work on administrative studies has been and is being done by individuals and Forests. Considerable progress is no doubt being made. But, as with most all activities, satisfactory Service-wide results will not be made until efforts are directed and correlated by some central authority.

For example, suppose that it is desirable to study the paper work being done in connection with the grazing activity with the idea of eliminating useless records and forms, combining others, and devising forms to fill the actual needs. Should not the study start at the top? Part of the controlling factors are entirely removed from and probably not definitely known by the Forests. One of the first things that must be known is just what information the Washington and Regional offices has to have about the grazing activity, and when they have to have it. With that information definitely stated the job could then be passed through the Regional Branch Chiefs to a group of Forests. The work in this and similar examples should then, I think, be carried by the personnel on the Forests. They probably make the most use of the various forms and have the facts regarding other controlling factors: the information that the supervisors and rangers have to have about the activity. The designated supervisors could by conferences or by correspondence, analyze all of the paper work being done in connection with the grazing activity and suggest methods and forms which would supply all of the records needed by the District Ranger, the Supervisor, and the Regional and Washington offices.

Another point, as I see it, is that when it comes to studying records, reports, forms, et al, the analysis should include everything connected with one activity. An analysis of the Form 428 might bring to light desirable changes, as one did two years ago. But if this form were studied in connection with all other grazing forms it might be found possible to devise a form that would supply all needed information that is now supplied by the permit allotment sheet, the card record Form 621, Form 428 and others. Likewise, the Form 861 G-D might be improved from the standpoint of a letter of transmittal. But a form could be worked out to serve as a letter of transmittal, a grazing permit, and a ranger's note book record and report of stock using Forest, etc. A ranger worked out such a form a few years ago. The form was made up so that on one of the carbon copies the information that the ranger needed was on a perforated section of note book size. His proposal would have combined Form 861 G-D, 656, and 874-12.

The foregoing is by no means an argument that no administrative studies or managerial research work can be done on a Forest independently of other administrative units. Inquiries in not a great many of the details of handling every day jobs will have to be made independently. But even with these things there should be a clearing-house of information to pass data regarding improved methods on to the other fellow. The point that

I have in mind is that more progress will be made if the bigger jobs are tackled by activity groups and the whole machine overhauled instead of just cleaning one of the spark plugs.

E. D. SANDVIG

BEAVERHEAD

DILLON, MONT.

1. From the few discussions that have appeared relative to the job of making administrative studies, much antipathy is expressed over questions of time, how, and who. Scott of the White Mountain is not concerned about "How to go about it?" But he becomes all bogged down on account of lack of time. It is true there are always more jobs waiting to be done than time to do them. Isn't this problem overcome by selection of those jobs of highest priority? Accordingly then, if it is agreed an administrative study is important enough I am sure time will be found to do the job, just as time to do a multitude of other jobs that looked stupendous and impossible at the start has been found.

The suggestion that an elaborate research organization be set up to accomplish the task is ill-advised. It would inject a finger with so many digits that the study would likely never extricate itself from the myriad of figures given birth by this move. I do not wish to leave the impression that a research organization would "mess up" or "bungle" the job, but that by so doing the job would look so gigantic that every administrative officer would approach it with fear and trembling or with the attitude "let Research do it".

To me it seems that the Regional Forester's conference in 1930 recommended adequate machinery to facilitate this important work when it suggested that a "liaison officer" be appointed for each region to head-up and give leadership for the study. The job will then be done on the ground by administrative men and the results of the study put into immediate application. In this region we already have such an officer, though perhaps not formally designated as such, conducting administrative analyses of Forest staffs. Through his services, studies can and perhaps are initiated to determine need, value, etc., of doing certain things in a precise way.

I am not inclined to look at "administrative studies" as something deep, dark, and awesome. Rather it will develop logically and naturally, if somebody gives it the right kind of a "push" to start with, resulting in a lot of administrative men summarily treating "ineffectiveness" and drilling out that decay "duplication" with determination.

J. N. LANGWORTHY

SHOSHONE

CODY, WYOMING

2. *The best possible organization for a Forest.*

There may be Forests where conditions are different from any with which I am familiar. I have been attached to only four forests, for any length of time, but these were scattered from the extreme south to the farthest north of R-2 and I naturally acquired familiarity with adjacent

forests, so, I consider myself fairly well informed as to the Forests of R-2 and some in adjoining Regions and I have yet to see one upon which the present organization was not functioning in a fairly satisfactory manner and making good headway.

The idea of replacing the district ranger with an improvement man or some other kind of man is an admission that someone should be on the district job and if someone, why not a ranger.

If centralization is advisable on a Forest, the same idea should work in the organization as a whole and the Regional offices could be substituted by an inspection squad in Washington, as it was in the beginning. One of the policies decided upon during the earliest days of the Forest Service was decentralization of authority. We have been working with that policy in view ever since.

"We are in a world of constant change", but who makes the change? It is man made and most of it unnecessary. Most Americans are dissatisfied. "When it is cold they want it hot, always wanting what is not". The Forest Service is no exception; we no sooner get something started, and learn when and how to do it, than someone gets a bright idea and it is discarded for something else.

There is a lot of work, not listed in the plans, which a ranger does. How about his public contacts with Forest dwellers and the knowledge it gives him of how to secure cooperation in protection activities and other work of the Forest. The fact that he is a Forest dweller and not a city man helps a lot in broadening the general viewpoint of the Service. He has an opportunity to see things while going about his daily duties, the realities of the job, not the creations of an office brain. His environment trains him, teaches him to see what others do not. No! It would be a great mistake to centralize the administration of a Forest in a city office. The tendency now is toward larger administrative units. This policy reduces overhead expense but it also makes the ranger position more important for it is necessary to divide a large administrative unit into sub-units to keep it from becoming unwieldy and authority must be delegated to the field in proportion to the size of the organization. The centralization of the administration in the supervisor's office could be carried out successfully on a small Forest. The larger the administrative unit the greater the need for decentralization.

E. G. MILLER

COCONINO

FLAGSTAFF, ARIZONA

1. It seems to me that it would be wise for the Forest Service to have a research committee look into all of the activities of the Service in different part of the country with a view of ascertaining what work can be eliminated, what short cuts could be taken without interfering with major objectives, and what organization would be most effective under different sets of conditions.

It is easy for any organization to spread out; the work becomes more

complex. After all, are we sure that all of the work is essential, and can be justified?

Take this question of grazing—merely because we have issued grazing permits for a good many years we may assume that the permit system is the best possible system under all sets of conditions. I am not at all sure that it is. In fact, I believe that there are Forests where we could lease lands on a per acre basis and save a lot of time and expense, and get more revenue out of grazing. Of course, it would be necessary to place a limit on numbers of livestock grazed and to restrict seasons, etc., but I believe that the lease would work, particularly on a Forest where the average permit is rather large and where there is not an acute demand for range by beginners.

Then take the question of timber sales. Can you justify so much refinement on brush work? Why scale every log that is cut? Could not some simpler method be found that would be fair to both the United States and to the purchaser? Why not scale a few hundred logs per week so as to get the average number per thousand, then merely count the logs and average them? Maybe the tree sale method could be perfected so that it would work on large sales. Why should we spend so much time on small sales? There are localities where there are millions of feet of timber rotting down every year yet some ranger makes a long trip to mark a few logs and make a sale to some homestead settler or farmer. I have seen inspectors "froth at the mouth" over a few high stumps where a settler had cut some posts or houselogs, yet when we think of it, why should we worry over a few high stumps? Maybe most of the timber in that particular locality will not be marketed within fifty years anyway. Can we convince ourselves that the leaving of a few high stumps, or permitting the cutting of trees without marking will in any way tend to impair the timber supply in that locality in the future? What we are after is the perpetuation of the Forest resources, and making them available for the use of the people today and in the future.

2. It seems doubtful if one type of organization would fully meet conditions on all Forests. Probably the staff specialist has come to stay and in places it seems reasonable that a large per cent of the field work could be handled to good advantage by a centralized staff. There are localities where it is essential that a ranger be stationed in order that the public may be served. If all of the men are concentrated at one point there would be danger, particularly in thickly settled localities, that a feeling would grow up that the "Government" is too far away; that it takes too long to get something done. The under ranger, or improvement man, would not fill the bill. It would certainly be difficult too on some Forests to maintain a fire organization that would be as effective under a centralized staff arrangement for the handling of the work as it is where district rangers are located at key stations. Of course, it may be argued that extra good firemen would have to be located at those places but the fact remains that it is difficult to get reliable short term men who know the country and the fire game, and who will return year after year for a two or three months' period of work.

"Over-hauling the machine." It is with apparent ease that we compare a machine made up of human beings, each of which is temperamentally different, with an automobile. For more than a quarter of a century we have studied and developed that machine until today, with our expert mechanics and their fully equipped workshops, it is a simple matter to over-haul the automobile. But where are the mechanics who can as ably and skilfully over-haul one of these human machines, such as a Forest organization? The average car owner does not turn himself loose to over-haul his own car. He doesn't know enough about it. Neither does he have the tools and shop with and in which to do it.

Before we can satisfactorily over-haul an organization, haven't we got to produce a crop of mechanics who will develop tools and a workshop in which to over-haul these human machines? Every car owner can do something—apply some minor correction to the old car. By doing some things he learns to do more. He may, if he is so inclined, eventually possess tools and a shop, and become a mechanic. He is no longer, however, just a car owner using the car to get his day's work done. He runs a garage and makes it a business to over-haul other people's cars.

Is each, the Forester, Regional Forester, and Supervisor going to be able to over-haul his organization? Unquestionably all of them will make some minor repairs, and sooner or later a few of them so inclined will come to possess tools and shop useful in completely over-hauling human machines or organizations like ours; and so we have our crop of administrative engineers. That is one way and, perhaps, the natural way but isn't it a costly way—one of trial and error?

My reaction to the discussions thus far is that ours is not a job of complete over-hauling—just minor repairs. In other words, "minor investigations and studies" rather than "research". Most forests have "cut corners" in some lines of work, when doing so brought results just as satisfactory as though no corners had been cut. Why mark each individual tree on a timber sale area if the marking is going to result in clear cutting? So we designate by area and require that all trees be cut to the lower limit of merchantability. Several hundred man-days have been saved after this method on a single sale. Also we were getting on nicely for awhile by not numbering logs on small sales and saving a lot of time; but it was too good to last. There was a kick-back. There is likely to be a kick-back on marking by area designation.

It is powerfully hard to get an old worn-out standard changed or junked; but once in awhile we make a change. Not infrequently somebody, through abuse or getting out of bounds, "kills the goose that lays the golden egg" and we are back once more to the old standard, more fully convinced than ever that it cannot be forsaken.

In trying to muster up courage to cut loose from the old ranger district set up in the Forest Service, a Supervisor wants to look before he leaps.

There are a lot of good things about the present set-up. Among these are: Service to users: custodianship and the incentives incident thereto: the general handy man the community finds in the ranger; precedent and an accustomed public; and small administrative units which can be covered effectively for all lines of work on a given trip by the ranger. Some of the things against it are: The volume of work, the nature of which is becoming more varied, intricate, and detailed, finds the ranger a "jack of all trades, expert at none." That was the type we needed in the old days, but a new era is dawning. It is already here on many districts. The ranger can no longer adequately meet the responsibilities of the heavy district in all activities. He must have help. Shall we make him a little supervisor and give him a clerk and one or two assistant rangers? That would make for a tremendous overhead charge.

The first most logical step to find a remedy on some forests is to combine two districts into one and have the two rangers on it. The work on this combined district should be divided as to responsibility between the two. Thus, one ranger would handle grazing and uses; the other timber sales and recreation. Each ranger would be held responsible to the supervisor for the lines of work assigned to him. These rangers would help and advise one another, travel together whenever practicable to do so, yet each would be responsible for certain lines of work. Each man would become fairly efficient in two lines of work, much more so than in all four lines.

This is about as far as I would care to go in departing from the present ranger district set-up. Perhaps, in the future, the work can be further specialized. My notion is that more specilization and less generalization holds the key to greater progress in the future. Our old machine, evolving primarily around the ranger, is becoming overloaded and must be more than over-hauled—it must be replaced with a new one. Any change, however, must be made with caution and gradually. If we do not know how to handle the new machine or can't learn it very quickly, things are likely to run amuck and we flop back to the old, more determined than before to stay with it.

J. F. BROOKS

SELWAY

KOOSKIA, IDAHO

2. The question quoted on page 17, "Why try to standardize organization throughout the entire Service when there might be situations that could be much better handled by modification or complete change?" raises an interesting point. There is a great spread in conditions on different types of Forests but fundamentally the organization is the same for all. With the facilitating of travel on all Forests since their creation it would seem that changes in organization might be effected to advantage but I am not so sure that the general scheme needs any drastic revision. Larger districts and larger Forests have resulted from job analyses and I believe that this is as far as we can go in reorganization. What can take the place on a grazing Forest of a representative to live among and work with the number of permittees he can handle, and what can take the place on a fire Forest which

centralizes the volume of improvement and fire control work possible for one man to do into a similar unit. I do not believe there is any substitute for either. The ranger on a grazing district needs closer association with his permittees than would be possible for him as a staff man. The ranger on a fire district through frequent contacts with his lookouts and smoke-chasers inspires a loyalty and respect from the good men and weeds out the poor ones much more effectively than any one could with several districts to look after. Personnel failures among Forest users and employees are, I believe, more readily discussed and remedied under our present organization than they would be under one consisting of specialists who would cover a lot of ground but would not have the opportunity for more or less constant checking.

On a Forest like the Selway I can not see any possibility of handling the work with a staff organization on account of the travel time element. Two ranger headquarters are on roads, two are sixteen miles each from the end of the roads, one is twenty-five miles and one is thirty-seven miles. The total length of roads on the Forest is only about seventy-five miles. A corps of staff men simply could not cover the country fast enough. The grazing is mostly by sheep, about 22,000 in number, all of which come on at once through four different entrances and are scattered to such an extent that one man could not in a reasonable time give this activity adequate supervision. There are about 100 fire control men and in 1931 about 150 improvement men spread over 1,350,000 acres. Only a small number of these men are on roads so the travel time element comes in again. If the Forest should eventually be opened up with roads a ranger could handle a larger district but I believe it would still be necessary to keep him in the middle of it during the field season.

On Forests with large timber sales business this work is often delegated to staff men but they have practically the equivalent of a district ranger in the form of a scaler or other officer in charge who spends his time on one large sale or two or three small ones.

The reasons for transferring responsibilities and authority from Washington to the Regions and from the Regions to the Forests are the same ones which make the Ranger District the logical unit and the more responsibility can be placed there the better. I realize that in some instances better results might be attained by the staff method and in these cases it should be applied.

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There has been much said about our failures to get the results of research in practice, and I believe that this can be traced directly to our organization. Industry has found it necessary to specialize. It does not depend on Jacks-of-all-trades, and yet the Forest Service demands that of the Ranger. It is a romantic idea but doesn't work. We have the work divided in the Washington and Regional offices, and to some extent in the Super-

visor's office, but when it comes to a Ranger, he is expected to be an expert in all lines of work. It just isn't possible, and the result is that we get poor work because he is not thoroughly familiar with what the best practices are. Twenty-five years ago he could stick his instructions in his pocket and be equipped, but it will take an extra pack-horse now.

I do not believe that we would want to do away with the Ranger district, but rather, enlarge them and then project a large amount of the work and have it handled by specialists, who would naturally be assigned to the Supervisor's office. Some work can be more profitably centralized, while other work is better handled by the district plan. The manager should be on the ground, but the special work should be handled centrally by a man who has enough of it to be familiar with the best practices. We should stop trying to make a carpenter and plumber out of men who will probably handle only one job of its kind in a life time. At the same time, a large amount of the planning work should be taken from the Ranger, while he should sit in and advise, the plan should be made by one who has made a thorough study of the subject. It is known that costs generally decrease where they are handled by special men. A man who spends all of his time on timber sales will do more work in a given length of time and do better work.

We need the Ranger district, however, for certain lines of work, particularly where there are regions remote from the Supervisor's headquarters. It is largely a matter of personal contact, not only with the area but with the users.

Actually, I believe that the Ranger would get more satisfaction out of his job if he were relieved of many of the more technical lines of work than he does now. It does not detract from the Supervisor's job to have an engineer make a survey and plan for a road or to have someone else build it. The question of how good the road is, is the one he is most concerned with. The better the job is, the more pride he has in his Forest. The specialist would, of course, have the same incentive to do good work that any man in charge of a job would have.

I do not doubt but that by projecting more work we will decrease costs and secure better work with less supervision.

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KANIKSU

NEWPORT, WASHINGTON

1. Seemingly a plan of action should be developed to facilitate the proposed work and guide our efforts along the right lines.

2. The best possible organization for a Forest depends upon the conditions involved in the administration of the Forest. A standard organization to fit all Forests would have pretty hard sledding and is not desirable. The Ranger's job has undergone considerable changes during the past few years and with present transportation facilities where such facilities apply, the trend is toward a mobile form of organization. It is now common practice to move district rangers to assist on fires outside their respective dis-

trict and even to adjacent Forests.

The theory that all activities within the boundaries of a certain ranger district should be under the supervision of a district ranger, is open to a great many questions. It is a nice form of organization but not always the best from the standpoint of economy and flexibility. Districts justifying the assignment of a district ranger for the full twelve months period are getting scarce and will become more so. Consequently, the area of individual ranger districts is going to increase as the improvement program reaches completion. The ultimate road system plan should consider logical travel routes for administrative purposes since speed of travel and location of routes will be the important factor in controlling the size of the administrative division.